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D.10 Public Health and Safety

This section addresses two issues: environmental contamination and electrical and magnetic fields. Sections D.10.1 through D.10.19 address the environmental setting and impacts related to the construction and operation of the Proposed Project and alternatives with regard to the subjects of environmental contamination and hazardous materials safety. Sections D.10.20 through D.10.28 address electric and magnetic fields and other electric field issues. Section D.10.29 presents the mitigation monitoring program for all topics covered in this section, and Section D.10.30 and D.10.31 provides references.

Environmental Contamination

This section addresses the environmental setting and impacts related to the construction and operation of the Proposed Project and alternatives involving the issues of environmental contamination and hazardous materials as well as safety. Sites with known and potential contamination along or near the proposed transmission line route were researched to better define the areas where hazardous waste contaminated sites may impact construction. The primary reasons for defining hazardous sites are to protect worker health and safety and to minimize public exposure to hazardous materials during construction and waste handling. Where they are encountered, contaminated soil may qualify as hazardous waste, requiring handling and disposal according to local, State, and federal regulations.

D.10.1 Regional Setting and Approach to Data Collection

Environmental Contamination

The Proposed Project transmission line traverses land used for a variety of uses including: open-space recreation and preserve, agricultural, rural and suburban residential housing, recreational, and commercial businesses. Existing and past land use activities are used as potential indicators of hazardous material storage and use. Many current and former commercial, industrial, and military sites have soil or groundwater contaminated by hazardous substances such as, heavy metals, and vehicle fuels; additionally military sites may have known or unknown unexploded ordnance¹ (UXO) in areas used for target practice and ordnance storage. Other hazardous materials sources include leaking underground tanks (LUSTs) in commercial, rural, and agricultural areas. Contaminated surface runoff may occur from polluted sites and agricultural fields that have been treated with pesticides, herbicides, and fumigants. In areas of past and current commercial or industrial use, contaminated groundwater plumes could exist along the transmission line routes.

As part of the application process, SDG&E provided environmental database searches conducted by Environmental Data Resources, Inc. (EDR, 2006a and 2006b). These reports are referred to hereafter as the “EDR database search”. Such database searches by third-party specialized contractors are often relied upon by agencies and others to identify known or potential sources of contamination. The scope of the database searches covered a one-mile wide corridor centered on the proposed and some of the alternative alignments. The search included 30 federal agency databases; 29 state, local county, and

¹ Unexploded ordnance are explosive weapons (e.g., bombs, shells, grenades, land mines, naval mines, etc.) that did not explode when they were employed and still pose a risk of detonation, potentially many decades after they were used or discarded.

local city records; and three tribal records. The EDR database search are included in Appendix 13 – Environmental Database Searches.

For this impact analysis, the EDR database search information was reviewed and analyzed for sites within 0.25 miles of the Proposed Project route. A quarter-mile distance was determined to be appropriate because based on the groundwater conditions along most of the project alignments (primarily deep groundwater with some areas of locally perched and geographically limited groundwater near streams and canals), only very large spills or leaks would migrate that distance. Migration over that distance would necessarily be via groundwater as contaminants in unsaturated soils migrate predominately downward and as contaminants travel through the soil the processes of filtration, sorption, biodegradation, and volatilization occur reducing or eliminating the potential for contaminants to reach groundwater. Groundwater would be encountered infrequently in borings and excavations for the Proposed Project. The sites analyzed for this project were those with known environmental contamination, sites with underground storage tanks (USTs), or sites that store, use, and dispose of hazardous materials off site with reported incidents of spills or inadequacies during inspections or in hazardous material records. These are sites with the potential to have resulted in environmental contamination within the project ROW. These sites were identified to better define the areas where hazardous waste contamination may exist and may impact construction activities. However, there is the potential for contamination to occur at nearly any location along the route as a result of unknown or unreported spills or leaks, or from illegal dumping.

The Proposed Project would require soil disturbance, including surface grading for access roads and pads, trenching for underground segments, and boring for tower foundations. These activities would rarely if ever reach groundwater, which might be contaminated by releases in the vicinity. Sites located further than 0.25 miles from the project ROW were judged to have no potential to have resulted in environmental contamination in the project ROW because none of these sites were found to contain large areas of known contamination nor were any large contaminated plumes identified within 0.25 to 1.0 miles from the project alignment. Many of the sites listed in the EDR database search are not hazardous materials release sites. Rather, they are listed as facilities that use, store, or dispose of hazardous materials offsite. Sites listed in the environmental databases were then reviewed based on distance from the alignment, type of site, and regulatory status of the site. Based on these characteristics, a determination was made whether the site would have potential to impact the project. Contaminated sites listed as remediated and/or “case closed” by the agency with regulatory oversight have no potential for environmental contamination within the project ROW. Facilities that store, use, or dispose of hazardous material and have no known spill history or would have little to no potential for environmental contamination that could affect the Proposed Project. Underground storage tank sites with no known leaks have low potential to have resulted in environmental contamination in the project ROW when the sites are within 0.25 miles of the project ROW or physically separated from the project ROW by major roads and drainages. Sites immediately adjacent to or within the project ROW with active or inactive underground storage tanks have low to moderate potential to have resulted in environmental contamination in the project ROW. Known contaminated sites located within 0.25 miles of the Proposed Project route currently undergoing site characterization or remediation have a high potential to impact the project ROW.

D.10.2 Environmental Setting for the Proposed Project – Environmental Contamination

The consistency of the Proposed Project with applicable plans and policies is addressed in Section D.16, where there is specific discussion of each item that was determined in the Appendix 2 screening process to warrant further evaluation. Appendix 2 (Policy Screening Report) lists all plans and policies applicable to the Proposed Project, and presents a preliminary screening evaluation of these policies.

D.10.2.1 Imperial Valley Link

The Imperial Valley Link traverses undeveloped open space and a small amount of agricultural property, and skirts a U.S. Naval Air Facility. This link would consist of modifications of the existing Imperial Valley Substation to accommodate termination of a new 500 kV transmission line and construction of lattice towers and steel poles within a new 200-foot ROW. The transmission line ROW would traverse open undeveloped desert and, from MP 5 to 10, inactive or abandoned agricultural land. It would be at the western margin of an active agriculture area from MP 13.5 to 19.5. This section of the alignment crosses Interstate 8 (I-8) at Milepost 6 (MP 6) but does not cross irrigation canals in the agricultural area. From MP 19.5 to 60.9 the proposed route passes through undeveloped open desert land consisting primarily of flat to gently sloping terrain with sparse scrub vegetation and dissected by numerous small washes and local arroyos (ephemeral stream channels). Additionally, from approximately MP 11.5 to 38.8 the route passes just outside of and generally parallel to navy/military land which has been and is currently used for bombing and munitions testing.

Based on review of the EDR database search (EDR, 2006a) and the U.S. Army Corps of Engineers Formerly Used Defense Sites database, there are four hazardous material sites within 0.25 miles of the Imperial Valley Link with potential to impact the project. These sites are summarized in Table D.10-1.

Table D.10-1. Identified Hazardous Material Sites within 0.25 Miles of the Imperial Valley Link

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
98	Centinela State Prison	2302 Brown Road, Imperial	RCRA-SQG, FINDS, CHMIRS, WDS, LUST	Small quantity generator, several small spills reported at the site, and a LUST with Case Closed status.
92	El Centro Rocket Target No. 1 (#92)	El Centro	FUDS	Approximately 160 acres that was formerly used (1945-1946) as a Navy rocket target training area. Bombing ordnance has been noted on the site.
59	El Centro Rocket Target No. 2 (#93)	El Centro	FUDS	Approximately 400 acres that was formerly used (1945-1946) as a Navy rocket target training area. Bombing ordnance has been noted on the site.
*	Kane Springs SBT (#62)	Kane Springs	FUDS	On USACE FUDS list. Property used between 1944 and 1946 by the Navy as a miniature bomb and strafing practice area; related bombing and strafing ordnance have been noted on the site.

Sources: (EDR, 2006a) and (USACE, 2007)

1 EDR Environmental Information Data Site I.D. Number. * indicates site identified in the USACE Imperial County FUDS database.

2 See Appendix 13 for detailed description of regulatory agency listings.

FEDERAL RECORDS

RCRA-SQG: Resource Conservation and Recovery Act Information

FINDS: Facility Index System/Facility Registry System, contains both facility information and 'pointers' to other sources that contain more detail.

FUDS: Formerly Used Defense Sites, locations of Formerly Used Defense Sites properties where the U.S. Army Corps of Engineers is actively working or will take necessary cleanup actions.

STATE AND LOCAL RECORDS

WDS: Waste Discharge System, sites which have been issued waste discharge requirements.

CHMIRS: California Hazardous Material Incident Report System

LUST: Leaking Underground Storage Tank

Imperial Valley Substation. The Imperial Valley Substation is located in undeveloped open space and no hazardous material sites are listed in the EDR database search at or adjacent to the property (EDR, 2006a).

D.10.2.2 Anza-Borrego Link

The entire length of the proposed Anza-Borrego Link (from MP 60.9 to 83.5) passes through open undeveloped lands in Anza-Borrego Desert State Park (ABDSP). This portion of the 500 kV transmission line would be constructed entirely overhead throughout the State Park on lattice towers or H-frame structures within existing and new ROW. This link also includes the underground installation within SR78 of the Imperial Irrigation District's 92 kV transmission line (east of Narrows Substation) and of SDG&E's 69 kV transmission line (west of Narrows Substation).

The Anza-Borrego Link traverses primarily flat to gently sloping open undeveloped desert terrain from approximately MP 60.9 to 68. This area consists of open desert with scattered scrub vegetation and is dissected by numerous small washes and local arroyos (ephemeral stream channels). From MP 68, the alignment runs along San Felipe Creek wash to the west and then northwest along Grapevine Canyon where the terrain is moderately steep and consists of undeveloped dissected desert terrain and desert washes with scattered scrub brush. Generally the alignment parallels existing paved and unpaved access roads.

Based on review of the EDR database search, there are no hazardous material sites within 0.25 miles of the Anza-Borrego Link of the Proposed Project with the potential to impact the project (EDR, 2006a).

D.10.2.3 Central Link

The Central Link traverses largely undeveloped mountain and valley terrain. The Central Link includes construction of the new Central East Substation capable of accommodating termination of one 500 kV transmission line from the Imperial Valley Substation and two 230 kV transmission circuits that would extend west to the Sycamore Canyon Substation. The area is distinctly rural. Minor commercial and residential development at Santa Ysabel is located about 0.5 miles east of the Central Link alignment where it crosses SR78. The 500 kV alignment crosses County road S2 at MP 90, and the 230 kV alignment crosses SR76 and SR79 at MP 100, and SR78 at MP 108.5.

Based on review of the EDR database search, there are five hazardous material sites within 0.25 miles of the Central Link segment of the Proposed Project transmission route with potential to impact the project (EDR, 2006a). These sites are summarized below in Table D.10-2.

Table D.10-2. Identified Hazardous Material Sites within 0.25 Miles of the Central Link

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
1	Vista Irrigation District	29189 San Felipe Road, Warner Springs	SD Co. HMMD	Site stores and uses miscellaneous hazardous materials, listed as having one 550-gallon UST.
9	Rancho Cando	27101 Mesa Grande Road, Santa Ysabel	HIST UST	Three 550-gallon gasoline USTs reported at this site.
11	Shenandoah Ranch	27220 Mesa Grande Road, Santa Ysabel	HAZNET, SD Co. HMMD, SWEEPS UST	Miscellaneous small quantity hazardous waste disposal. Site listed as having two USTs: one 550-gallon and one 250-gallon.
23	O.A. Cumming	28368 Highway 78, Ramona	HIST UST, SWEEPS UST	Cattle Ranch with two reported USTs.
24	Tulloch Ranch	28223 Highway 78, Ramona	HIST UST, SWEEPS UST	One 500-gallon fuel UST listed at this site.

Sources: (EDR, 2006a) and (USACE, 2007)

1 EDR Environmental Information Data Site I.D. Number.

2 See Appendix 13 for detailed description of regulatory agency listings.

STATE AND LOCAL RECORDS

HIST UST: Hazardous Substance Storage Container Database, a historical listing of UST sites.

SWEEPS UST: Statewide Environmental Evaluation and Planning System, listing of USTs from 1980s.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

D.10.2.4 Inland Valley Link

The Inland Valley Link traverses mountain and valley terrain and the urbanized area of Ramona. The Inland Valley Link includes a double-circuit 230 kV transmission line in both overhead and underground construction. The underground segment from MP 117.2 to 122 would be located beneath gravel and paved roads in Ramona and pass near the commercial center located at the intersection of Gunn Stage Road and San Vicente Road. The Inland Valley Link then continues overhead through rural low-density residential areas in the mountain areas north of San Vicente Reservoir and crosses SR67 at MP 131.9. From SR67 to the existing Sycamore Canyon Substation (MP 136.3), the overhead double-circuit 230 kV transmission lines would be built within the existing SDG&E ROW located south of the rapidly urbanizing area centered along Scripps-Poway Parkway.

Based on review of the EDR database search, there are two hazardous material sites within 0.25 miles of the Inland Valley Link portion of the Proposed Project with potential to impact the project (EDR, 2006a). These sites are summarized in Table D.10-3.

Table D.10-3. Identified Hazardous Material Sites within 0.25 Miles of the Inland Valley Link

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
38	The Village Cleaners	23660 San Vicente Road, Ramona	HAZNET, SD Co. HMMD, CLEANERS	Active dry cleaners. Small quantity hazardous waste generator.
41	SD County Estate Water Treatment/Ramona Mutual Water District	22758 San Vicente Road, Ramona	HAZNET, SWEEPS UST, SD Co. HMMD	Disposed of asbestos waste, and site is listed as having one 1000-gallon diesel UST.

Sources: (EDR, 2006a)

1 EDR Environmental Information Data Site ID Number.

2 See Appendix 13 for detailed description of regulatory agency listings.

STATE AND LOCAL RECORDS

SWEEPS UST: Statewide Environmental Evaluation and Planning System, listing of USTs from 1980s.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

CLEANERS: Cleaner Facilities, a list of drycleaner-related facilities that have EPA ID numbers.

D.10.2.5 Coastal Link

The Coastal Link components of the Proposed Project include modifications at the Sycamore Canyon Substation, construction of a single-circuit 230 kV transmission line from the existing Sycamore Canyon Substation to the existing Peñasquitos Substation, and modification of the Peñasquitos Substation to accommodate termination of one new 230 kV transmission line. The Coastal Link consists of both overhead and underground segments principally within existing SDG&E ROW. The Sycamore Canyon Substation is located at the northern edge Marine Corps Air Station Miramar. The portion of the route from Sycamore Canyon Substation (MP 136.3) to the start of the underground portion (MP 142.3) would traverse ridge and valley areas within the existing ROW, passing through residential areas and minor commercial and light industrial uses near where the alignment crosses Scripps Poway Parkway. The underground portion would be located within an existing, vacant SDG&E ROW between MP 142.3 and MP 143.9 and would then follow a new ROW along paved (Park Village Drive) and unpaved (existing trail within Los Peñasquitos Canyon Open Space Preserve) routes to MP 146.6. The underground portion traverses predominantly residential areas and the undeveloped area within the Los Peñasquitos Canyon Preserve. The final overhead segment traverses undeveloped ridge and valley areas and locally the existing ROW is adjacent to new residential areas.

Based on review of the EDR database survey, there are 13 hazardous material sites within 0.25 miles of the Coastal Link portion of the Proposed Project transmission route with potential to impact the project (EDR, 2006a). These sites are summarized in Table D.10-4.

Table D.10-4. Identified Hazardous Material Sites within 0.25 Miles of the Coastal Link

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
82	Martin Marietta Technologies/Lockheed Martin-STF	11975 Beeler Canyon Road, Poway	HAZNET, SD Co. HMMD	Generates and disposes of miscellaneous organic waste and laboratory chemicals.
80	Poway Plant/Cal Mat Company/Padre Transit Mix, Inc.	10975 Beeler Canyon Road, Poway	WDS, HAZNET, AST, LUST, CORTESE, EMI, SWEEPS UST, HIST UST	Site has disposed of organic and oil containing waste. Site listed with one AST. LUST is Case Closed. Nine USTs listed at the site with sizes ranging from 500 to 10,000 gallons.

Table D.10-4. Identified Hazardous Material Sites within 0.25 Miles of the Coastal Link

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
71	Pacific Bell	10907 Scripps Poway Parkway, San Diego	SD Co. HMMD	Site has one 600-gallon UST listed.
66	Scripps Energy LLC	12033 Scripps Summit Drive, San Diego	HAZNET, SD Co. HMMD	Three fuel USTs onsite, 25,000; 10,000; and 12,000.
66	USA Gasoline Corp No. 0851	12010 Scripps Highland Drive, San Diego	FINDS, RCRA-SQG	No further details listed.
66	Exxon Mobil	10555 Scripps Poway Parkway	FINDS, HAZNET, RCRA-LQG, UST, SC CO. HMMD	Site has disposed of contaminated soil from site cleanup, oil containing waste, and other organic liquids and solids. Site listed as having 3 USTs; 20,000- and 10,000-gallon gasoline tanks, and an 8,000-gallon diesel tank.
64	Nokia Mobile Phones Inc	12278 Scripps Summit Drive, San Diego	HAZNET, SD Co. HMMD	Disposes of liquid and solid organic waste and laboratory chemicals.
62	Dye Precision Inc.	10367 Scripps Summit Court, San Diego	FINDS, HAZNET, RCRA-LQG, SD Co. HMMD	Large quantity hazardous waste generator.
53	Shell Service Station #12/Exxon #1039	12929 Rancho Peñasquitos, San Diego	HAZNET, CORTESE, UST, FINDS, LUST, EMI	LUST discovered in 1988, contamination affected groundwater. Site listed as undergoing pollution characterization. Disposal of miscellaneous organics. Number of USTs not listed,
53	Unocal Service Station	12860 Rancho Peñasquitos Blvd, San Diego	HIST UST, UST, HAZNET, FINDS, EMI, LUST, CORTESE	Disposes of organic solids and waste oil. Site listed as having 3 10,000-gallon fuel USTs and one 1000 waste oil UST. Soil only LUST, Case Closed.
53	One Hour Martinizing – Rancho	12880 Rancho Peñasquitos Blvd, Suite A, San Diego	RCRA-SQG, FINDS, HAZNET, EMI	Disposes of halogenated organic liquids.
53	Mobile Oil Station	12849 Rancho Peñasquitos Blvd, San Diego	UST, FINDS, LUST, EMI, SWEEPS UST, HAZNET, NOTIFY 65, HIST UST	Three fuel USTs and one waste oil UST listed. LUST is Case Closed. Site disposes of organic liquids and waste.
90	Chevron Service Station #20-90367	11140 Ocean Air Drive, San Diego	SD Co. HMMD	Two USTs listed at the site; 20,000- and 15,000-gallon gasoline tanks.

Sources: (EDR, 2006a)

1 EDR Environmental Information Data Site I.D. Number.

2 See Appendix 13 for Detailed Description of Regulatory Agency Listings.

FEDERAL RECORDS

RCRA-SQG: Resource Conservation and Recovery Act Information, Small Quantity Generator

RCRA-LQG: Resource Conservation and Recovery Act Information, Large Quantity Generator

FINDS: Facility Index System/Facility Registry System, contains both facility information and 'pointers' to other sources that contain more detail.

STATE AND LOCAL RECORDS

HIST UST: Hazardous Substance Storage Container Database, a historical listing of UST sites.

SWEEPS UST: Statewide Environmental Evaluation and Planning System, listing of USTs from 1980s.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

UST: Active UST Facilities, Active UST facilities gathered from the local regulatory agencies

CLEANERS: Cleaner Facilities, a list of drycleaner related facilities that have EPA ID numbers.

WDS: Waste Discharge System, sites which have been issued waste discharge requirements.

CORTESE: "Cortese" Hazardous Waste & Substances Sites List.

EMI: Emissions Inventory Data, toxics and criteria pollutant emissions data collected by air pollution agencies.

AST: Aboveground Petroleum Storage Tank Facilities.

NOTIFY 65: Proposition 65 Records, facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

D.10.3 Applicable Regulations, Plans, and Standards

Environmental Contamination

Hazardous substances are defined by federal and State regulations. These substances have certain chemical, physical, or infectious properties that cause them to be considered hazardous. Hazardous substances are defined in CERCLA Section 101(14), and also in the California Code of Regulations (CCR), Title 22, Chapter 11, Article 2, Section 66261, which provides the following definition:

A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

For this analysis, soil that is excavated from a site containing hazardous materials would be considered a hazardous waste if it exceeded CCR Title 22 criteria, or, on federal/BLM lands, if it exceeded criteria defined in CERCLA or other applicable federal regulations. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if the material is excavated. Even if soils or groundwater at a contaminated site do not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies with jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking jurisdiction.

Federal Regulations, Plans, and Standards

U.S. Environmental Protection Agency (U.S. EPA)

The U.S. Environmental Protection Agency (U.S. EPA) was established in 1970 in response to the growing public demand for cleaner water, air and land. The U.S. EPA was established to consolidate in one agency a variety of federal research, monitoring, standard-setting and enforcement activities to ensure environmental protection. U.S. EPA's mission is to protect human health and to safeguard the natural environment — air, water, and land — upon which life depends. U.S. EPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, U.S. EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the

Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law (U.S. Code Title 42, Chapter 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enables the revision of the National Contingency Plan (NCP). The NCP (Title 40, Code of Federal Regulation [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List (NPL). CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

As part of the Clean Water Act, the U. S EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the CFR, Part 112 (Title 40 CFR, Part 112) which is often referred to as the "SPCC rule" because the regulations describe the requirements for facilities to prepare, amend and implement SPCC Plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the “Navigable Waters” of the United States.

Other federal regulations overseen by the U.S. EPA relevant to hazardous materials and environmental contamination include Title 40, CFR, Chapter 1, Subchapter D – Water Programs and Subchapter I – Solid Wastes. Title 40, CFR, Chapter 1, Subchapter D, Parts 116 and 117 designate hazardous substances under the Federal Water Pollution Control Act. Title 40, CFR, Part 116 sets forth a determination of the reportable quantity for each substance that is designated as hazardous in. Title 40, CFR, 117 applies to quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

Occupational Safety and Health Administration (OSHA)

OSHA’s mission is to assure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA staff establishes and enforces protective standards, and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in Title 29 CFR Part 1910.

Bureau of Land Management (BLM)

The Bureau of Land (BLM) engages in hazardous material emergency response actions, site evaluations, and prioritization of cleanups in accordance with laws and regulations. This involves working with the U.S. EPA, State environmental quality departments, counties, and responsible parties (both public and private) to fund and expedite the cleanup of hazardous sites within their jurisdictions. Those sites that are an imminent threat to public health and safety, as well as those sites that are under a consent order and can therefore generate penalties and fines, are a BLM priority. Under the BLM Handbook

1703, "Hazard Management and Resource Restoration", the following policies have been set (BLM, 2006):

- Protect public health and safety and environmental resources by minimizing environmental contamination and hazards on public land and BLM owned or operated facilities.
- Comply with federal and state hazardous materials management laws and regulations and laws and regulations dealing with other hazards.
- Maintain the health of ecosystems through assessment, cleanup, correction, and restoration of contaminated sites and other hazards.
- Manage hazards and hazardous materials related risks, costs and liabilities.
- Integrate environmental protection and compliance with all environmental statutes into all BLM activities.

State Regulations, Plans, and Standards

California Environmental Protection Agency (CalEPA)

The CalEPA was created in 1991. It centralized California's environmental authority, consolidating Air Resources Board (ARB), State Water Resources Control Board (SWRCB), Integrated Waste Management Board (IWMB), Department of Toxic Substance Control (DTSC), Office of Environmental Health Hazard Assessment (OEHHA), and Department of Pesticide Regulation (DPR) under one agency. These agencies were placed within the CalEPA "umbrella" to create a cabinet-level advocate for the protection of human health and the environment and to ensure the coordinated deployment of State resources. Its mission is to restore, protect and enhance the environment, to ensure public health, environmental quality, and economic vitality. The DPR, DTSC, IWMB, and SWRCB regulate hazardous materials and hazardous waste that have the potential to cause soil, water, and groundwater contamination, and their missions are summarized below.

- **Department of Pesticide Regulation.** The Department of Pesticide Regulation (DPR) has the primary responsibility for regulating all aspects of pesticide sales and use to protect the public health and the environment. DPR's mission is to evaluate and mitigate impacts of pesticide use, maintain the safety of the pesticide workplace, ensure product effectiveness, and encourage the development and use of reduced risk pest control practices while recognizing the need for pest management in a healthy economy.
- **Department of Toxic Substances Control.** The DTSC mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention.
- **Integrated Waste Management Board.** The mission of the IWMB is to protect the public health and safety and the environment through waste prevention, waste diversion, and safe waste processing and disposal.
- **State Water Resources Control Board.** The SWRCB mission is to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

Department of Toxic Substance Control (DTSC)

DTSC is a department of CalEPA and is the primary agency in California that regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Government Code §65962.5 (commonly referred to as the Cortese List) includes DTSC listed hazardous waste facilities and sites, DHS lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks and which have had a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.

California Office of Emergency Services (OES)

In order to protect the public health and safety and the environment, the California OES is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release or threatened release of hazardous materials. Basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and the health risks) needs to be available to firefighters, public safety officers, and regulatory agencies needs to be included in business plans in order to prevent or mitigate the damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code Article 1–Hazardous Materials Release Response and Inventory Program (Sections 25500 to 25520) and Article 2–Hazardous Materials Management (Sections 25531 to 25543.3).

CCR Title 19, Public Safety, Division 2, Office of Emergency Services, Chapter 4–Hazardous Material Release Reporting, Inventory, And Response Plans, Article 4 (Minimum Standards for Business Plans) establishes minimum statewide standards for Hazardous Materials Business Plans (HMBPs). These plans shall include the following: 1) a hazardous material inventory in accordance with Sections 2729.2 to 2729.7; (2) emergency response plans and procedures in accordance with Section 2731; and (3) training program information in accordance with Section 2732. Business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state. Each business shall prepare a HMBP if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following:

- 500 pounds of a solid substance
- 55 gallons of a liquid
- 200 cubic feet of compressed gas
- a hazardous compressed gas in any amount
- hazardous waste in any quantity

California Occupational Safety and Health Administration (Cal/OSHA)

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (Title 8, Code of California Regulations

[CCR], Sections 337 to 340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

Title 8 CCR, Chapter 4, Subchapter 7, Group 14 and 15, and Group 16, Articles 107, 109, and 110 sets forth the permissible exposure limit (PEL), which is the exposure, inhalation or dermal permissible exposure limit for numerous chemicals. Included are chemicals, mixture of chemicals, or pathogens for which there is statistically significant evidence, based on at least one study conducted in accordance with established scientific principles, that acute or chronic health effects may occur in exposed employees.

Cal/OSHA is responsible for ensuring compliance with the provisions of the Hazard Communication Standard. California Labor Code Sections 6360 through 6399.7 and Title 8 California Code of Regulations Sections 5191 and 5194 are intended to ensure that both employers and employees understand how to identify potentially hazardous substances in the workplace, understand the health hazards associated with these chemicals, and follow safe work practices. This is accomplished by preparation of a Hazard Communication Plan.

Office of Environmental Health Hazard Assessment (OEHHA)

Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986, was enacted as a ballot initiative in November 1986. The Proposition was intended to protect California citizens and the State's drinking water sources from chemicals known to cause cancer, birth defects, or other reproductive harm, and to inform citizens about exposures to such chemicals. Proposition 65 requires the Governor to publish, at least annually, a list of chemicals known to the state to cause cancer or reproductive toxicity. OEHHA has established safe harbor levels (levels of exposure that trigger the warning requirement) for some, but not all, listed chemicals. Businesses that cause exposures greater than the safe harbor level must provide Proposition 65 warnings. If there is no safe harbor level for a chemical, businesses that knowingly expose individuals to that chemical would generally be required to provide a Proposition 65 warning, unless the business could show that risks of cancer or reproductive harm resulting from the exposure would be below levels specified in Proposition 65 and its accompanying regulations.

Local Regulations, Plans, and Standards

Imperial County Public Health Department

The Imperial County Public Health Department, Division of Environmental Health Services, promotes a healthy, safe environment for all members of our community through the regulation of businesses and facilities, such as retail food facilities, small public water systems, private sewage disposal systems, solid waste facilities, public swimming pools, and local detention facilities. Members of the Division participate in a chemical spill emergency response team to provide public health guidance during spill containment and cleanup. The Imperial County Division of Environmental Health Services participates on the Imperial County Hazardous Emergency Assistance Team (HEAT) in providing health and safety expertise in the containment and cleanup of accidental spills.

The California Department of Toxic Substances has been appointed as the control agency for the Certified Unified Program Agency (CUPA) in Imperial County to manage the following State programs: the Hazardous Materials Business Plan/Emergency Response Plan, Hazardous Waste/Tiered

Permitting, Underground Storage Tanks, Aboveground Storage Tanks (SPCC only), California Accidental Release Program and the Uniform Fire Code Hazardous Materials Management Plan.

San Diego County

The Hazardous Materials Division (HMD) is one of four divisions of the San Diego County Department of Environmental Health (DEH). HMD is the CUPA for San Diego County responsible for regulating hazardous materials business plans and chemical inventory, hazardous waste and tiered permitting, underground storage tanks, and risk management plans. The HMD protects human health and the environment by ensuring that hazardous materials, hazardous waste, medical waste and underground storage tanks are properly managed. The HMD has several programs working with the regulated community and the public which include: the California Accidental Release Prevention Program; the Hazardous Incident Response Team; the Hazardous Materials Duty Desk; the Pollution Prevention Specialist; and the Underground Storage Tank Group.

The Land and Water Quality Division of San Diego County DEH is responsible for administering the Site Assessment and Mitigation Program, which oversees environmental investigations and remedial actions, primarily those related to underground storage tanks, to protect human health and water resources within San Diego County.

City of San Diego

The City of San Diego hazardous material regulations are provided in the San Diego Municipal Code, Chapter 4, Article 2, Division 8 (Hazardous Waste Establishments) and Division 9 (Disclosure of Hazardous Materials) as well as Chapter 5, Article 4, Division 7 (Investigation and Cleanup of Contaminated Property). The regulations for use of explosive materials within the city are provided in Chapter 5, Article 5, Division 77. However, enforcement of State and most other hazardous regulation within the city is through the San Diego County CUPA.

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Environmental Impacts and Mitigation Measures for the Proposed Project – Environmental Contamination

D.10.4 Significance Criteria and Approach to Impact Assessment

D.10.4.1 Significance Criteria

Environmental Contamination

The environmental impact involving hazardous waste would be in the potential mobilization of contaminants through excavation and handling of contaminated soil, resulting in exposure of workers and the general public. The contamination can either exist at the construction site prior to construction or be the result of releases associated with the construction activity itself. Hazardous materials in the construction area may require special handling, as toxic substances and hazardous waste can create an exposure risk to workers and the general public.

Toxic substances may cause short-term and/or long-term health effects. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances are hazardous because of their flammable properties. Gasoline, hexane, and natural gas are examples of ignitable substances. Corrosive substances are chemically active and can damage other materials or cause severe burns upon contact. Examples include strong acids and bases such as sulfuric acid (battery) or lye. Reactive substances may cause explosions or generate gases or fumes. Explosives, pressurized canisters, and pure sodium metal (which reacts violently with water) are examples of reactive materials.

Soil that is excavated from a site would be classified as a hazardous waste if it exceeded specific CCR Title 22 criteria. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials is performed. Contaminated soil exceeding regulatory limits for construction backfill would require on-site treatment or transport to appropriate off-site processing or disposal facilities permitted to handle the waste. Contaminated soil removed from the construction area must be transported according to State and federal laws and regulations and be replaced by imported soil approved for backfill. Similar issues pertain to contaminated groundwater. Even if soil or groundwater at a contaminated site does not have the characteristics necessary to define it as hazardous waste, remediation of the site may be required by regulatory agencies having jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

Distance from the alignment and physical barriers, such as roads and other facilities, limit surface migration of contaminants from the source. Therefore, active hazardous waste sites greater than 0.25 miles from the proposed transmission line route would have no potential to cause contamination along the proposed transmission line ROW. Subsurface migration of contaminants within the unsaturated soil zone is predominantly vertically downward and not horizontally, except in areas of significant slope where contamination may follow the gradient direction. In areas of shallow groundwater, contamination may travel greater distances, but in the absence of significant groundwater flow induced by steep groundwater gradients or nearby well pumping, it is not expected to travel far from the contamination source. Along the alignment of the Proposed Project, groundwater is generally deep below the surface.

Except in the vicinity of Warner Springs (in the vicinity of the intersection of County Route 2 and SR79, the likelihood of reaching groundwater is low. Small areas/pockets of perched groundwater may be encountered near to canals in the agricultural areas and near stream or river crossings. Refer to Section D.12, Water Resources, for a discussion of groundwater along the alignment.

No known contaminated sites were identified in the EDR database search survey as within the Proposed Project ROW. However, many hazardous material sites were identified near and along the ROW. It is possible that unlisted contaminated sites or that unknown contamination from the current EDR listed hazardous materials sites could be discovered during construction of the Proposed Project. Contamination of soils may exist in the rural residential, commercial, and light industrial land use areas of the project area due to off-site migration of pollutants, unauthorized dumping, and unreported hazardous materials spills.

An impact would be considered significant if project construction or operation would:

- Result in soil contamination, including flammable or toxic gases, at levels exceeding federal, State, or local hazardous waste limits, including those established by Title 40, CFR, Part 261 and Title 22, CCRs, 66261.21, 66261.22, 66261.23, and 66261.24.
- Mobilize contaminants currently in the soil, which would result in exposure of humans and other sensitive receptors such as plants and wildlife to contaminant levels that could be result in short-term and/or long-term health effects.
- Result in the presence of contaminated soils or groundwater within the project area; thereby, exposing workers and/or the public to contaminated or hazardous materials during transmission line construction activities, at levels exceeding those permitted by California Occupational Safety and Health Administration (Cal/OSHA) in CCR Title 8, Chapter 4, Subchapter 7, Group 14 and 15, and Group 16, Articles 107, 109, and 110 and the Federal Occupational Safety and Health Administration (OSHA) in Title 29, CFR, Part 1910.

D.10.4.2 Applicant Proposed Measures

Applicant Proposed Measures (APMs) were identified by SDG&E in the PEA. Table D.10-5 presents the APMs that are relevant to environmental contamination. The impact analysis assumes that all APMs are incorporated in the project and are implemented as defined in the table.

Table D.10-5. Applicant Proposed Measures – Public Health & Safety (Contamination)

APM No.	Description
HS-APM-1	All personnel involved in using hazardous materials shall be trained in the proper use and safety procedures for the chemical and provided with the necessary Personal Protection Equipment (PPE). A Hazardous Communication (HAZCOM) Plan with Material Safety Data Sheets on all hazardous materials used for the Project shall be developed.
HS-APM-2	Only personnel trained in refueling vehicles would be allowed to perform this operation. All refueling operation shall be in designated areas or preformed by assigned vehicles.
HS-APM-3	All applicable environmental safety plans associated with hazardous materials shall be developed for the Project. These plans include but are not necessarily limited to Hazardous Material Business (HMB) Plan; HAZCOM Plan; Spill Response Plan; 90-day temporary storage and disposal (TSD) facility permit; and SPCC (only if storage is over 1,350 gallons at one location) Plan.
HS-APM-4	SDG&E will develop a site specific blasting plan if blasting of tower footing is required. A California licensed Blasting Contractor shall be used for all blasting operation.

Table D.10-5. Applicant Proposed Measures – Public Health & Safety (Contamination)

APM No.	Description
HS-APM-5	All Government Code §65962.5 sites or other known contamination sites along the transmission line ROW or such sites that would affect construction work shall be investigated to determine potential impacts to the Project.
HS-APM-6	An Unexploded Ordnance (UXO) investigation of known and potential areas used by the military along the ROW shall be undertaken by a trained contractor. If UXO are found, they shall be removed by trained personnel.
HS-APM-7	All personnel involved in excavation and grading or for ROW clearing shall be trained to recognized UXO and/or potential soil, surface water, and groundwater potential contamination sites.
HS-APM-8	SDG&E will assign an Environmental Field Representative and/or General Contractor assigned Health & Safety Office to the Project.
HS-APM-9	SDG&E will contact airport representatives and/or Federal Aviation Administration Authorities regarding work within all existing and proposed transmission line corridors within 2 miles of an airport.
HS-APM-10	All hazardous waste and solid waste shall be stored and disposed of in accordance with federal, State, and local regulations. Whenever feasible, hazardous material minimization methods shall be employed and all hazardous materials recycled.
HS-APM-11	SDG&E will develop a Project-specific Fire Prevention and Response Plan (FPRP) which will be reviewed by pertinent regulatory authorities. A Project Fire Marshal shall be assigned to enforce all provisions of the FPRP as well as performing all other duties related to fire prevention activities for the Proposed Project.
HS-APM-12	A Traffic Control Plan (TCP) shall be developed that addresses all roadway crossings that would interfere with emergency vehicles.
HS-APM-14	All construction workers shall undergo environmental training regarding potential exposure in accordance with federal, State, or local regulations.
HS-APM-15	If during excavation if soil or groundwater contamination is suspected (e.g., unusual soil discoloration or strong odor), the contractor or subcontractor shall immediately stop work and notify the General Contractor's assigned Health & Safety Officer and/or SDG&E's Field Environmental Representative.
HS-APM-16	If soil or groundwater contamination is suspected, work near the excavation site shall be terminated, the work area cordoned off, and appropriate health and safety procedures implemented for the location by the General Contractor's assigned Health & Safety Officer and/or SDG&E's Field Environmental Representative. Preliminary samples of the soil, groundwater, or material shall be taken by an OSHA trained individual. These samples shall be sent to a California Certified Laboratory for characterization.
HS-APM-17	If the sample testing determines that contamination is not present, work would be allowed to proceed at the site. However, if contamination is found above regulatory limits, the regulatory agency (e.g., RWQCB or CUPA) responsible for responding to and for providing environmental oversight of the region shall be notified in accordance with State or local regulations.

Source: PEA, Chapters 5, 6, 7 and 8.

D.10.4.3 Impacts Identified

Table D.10-6 lists the impacts identified for the Proposed Project, along with the significance of each impact. Detailed discussions of each impact and the specific locations where each is identified are presented in the following sections.

Table D.10-6. Impacts Identified – Public Health and Safety (Contamination)

Impact No.	Description	Impact Significance
Proposed Project		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-2	Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas	Class II

Table D.10-6. Impacts Identified – Public Health and Safety (Contamination)

Impact No.	Description	Impact Significance
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-4	Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers during construction	Class III
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
P-7	Excavation and grading could result in mobilization of existing soil or groundwater contamination from known sites	Class II
Proposed Project – Future Expansion		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-2	Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading	Class II
P-4	Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers or the public during construction	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance	Class II
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
P-7	Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites	Class II
Proposed Project – Connected Action		
P-1	Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination	Class II
P-2	Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas	Class II, No Impact
P-3	Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading	Class II
P-4	Unexploded ordnance encountered during construction could explode and injure workers or the public	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance	Class II
P-7	Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites	Class II

D.10.5 Imperial Valley Link Impacts and Mitigation Measures

Construction Impacts

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

During construction operations, hazardous materials such as vehicle fuels, oils, and other vehicle maintenance fluids would be used and stored in construction staging yards. A list of hazardous materials typically used for transmission line construction that are expected to be used during project construction is presented in Table D.10-7.

Table D.10-7. Hazardous Materials Typically Used for Transmission Line Construction

2-cycle oil (contains distillates and hydrotreated heavy paraffinic)	Acetylene gas
ABC fire extinguisher	Ammonium hydroxide
Air tool oil	Battery acid (in vehicles and in the meter house of the substations)
Automatic transmission fluid	Insect killer
Canned spray paint	Chain lubricant (contains methylene chloride)
Diesel de-icer	Connector grease (penotox)
Eye glass cleaner (contains methylene chloride)	Contact cleaner 2000
Diesel fuel	Diesel fuel additive
Gasoline	Gasoline treatment
Hot stick cleaner (cloth treated with polydimethylsiloxane)	Lubricating grease
Insulating oil (inhibited, non-PCB)	Methyl alcohol
Mastic coating	Paint thinner
Wasp and hornet spray (1,1,1 trichloroethene)	Antifreeze (ethylene glycol)
Bottled oxygen	Puncture seal tire inflator
Hydraulic fluid)	Starter fluid
Propane	WD-40
Safety fuses	ZIP (1,1,1-trichloroethane)
Sulfur hexafluoride (within the circuit breakers in the substations)	Brake fluid
ZEP (safety solvent)	Motor oils

Source: PEA, Chapter 5, Section 13.

Gasoline, diesel fuel, oil, hydraulic fluid, lubricants paints, solvents, adhesives, and cleaning chemicals used in construction activities, equipment, and vehicles can be released during construction. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). Please note the full text of the mitigation measures appears in Appendix 12.

Mitigation Measures for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

- P-1a Implement Environmental Monitoring Program.** An environmental monitoring program will be implemented by SDG&E or its contractors to ensure that the plans defined in HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (storage and disposal of hazardous and solid waste) are followed throughout the period of construction. SDG&E will designate an Environmental Field Representative, who will be on site to observe, enforce, and document adherence to the plans for all construction activities.
- P-1b Maintain emergency spill supplies and equipment.** Hazardous material spill kits will be maintained on-site by SDG&E or its contractors for response to small spills. This shall include oil-absorbent material, tarps, and storage drums to be used to contain and control any minor releases. Emergency spill supplies and equipment will be kept adjacent to all areas of work and in staging areas, and will be clearly marked. Detailed information for responding to accidental spills and for handling any resulting hazardous materials will be provided in the project's Spill Response Plan defined in HS-APM-3.

Impact P-2: Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas (Class II)

The potential presence of residual pesticide and herbicide contamination of the soil and/or groundwater in the agricultural areas along the alignment (MP 5 to 20) represents a significant impact due to the potential health hazards to construction workers and the public stemming from exposure to pesticide or herbicide contaminated soil and/or groundwater. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, area cordoned off, and appropriate health and safety measures taken, sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, even with the implementation of APMs, the impact would be significant as pesticide and herbicide contamination is not always readily apparent by visual or olfactory indicators. Mitigation Measure P-2a (Test for residual pesticides/herbicides) is required to reduce this impact to less than significant (Class II).

Mitigation Measure for Impact P-2: Residual Pesticides and/or Herbicides could be encountered during grading or excavation in agricultural areas

- P-2a Test for residual pesticides/herbicides in agricultural areas.** In areas where the land has been or is currently being farmed, soil samples shall be collected and tested for herbicides, pesticides, and fumigants to determine the presence and extent of any contamination. The sampling and testing plan shall be prepared and conducted by an appropriate California licensed professional and sent to a California Certified laboratory. Samples shall be tested at a California Certified Laboratory. A report documenting the areas proposed for sampling, and the process used for sampling, testing shall be submitted to the CPUC and BLM for review and approval at least 60 days before construction. Results of the laboratory testing and recommended resolutions for handling and excavation of material found to exceed regulatory requirements shall be submitted to the CPUC and BLM (if on BLM land) 30 days prior to construction.

Excavated materials containing elevated levels of pesticide or herbicide will require special handling and disposal according to procedures established by the regulatory agencies. Effective dust suppression procedures will be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Regulatory agencies for the State of California (DTSC or RWQCB) and the appropriate County (San Diego or Imperial) shall be contacted by SDG&E or its contractor to plan handling, treatment, and/or disposal options.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Review of the EDR database search survey indicates that, other than Formerly Used Military Sites (FUDS), there are no other environmentally contaminated sites along the Imperial Valley Link proposed ROW. Where the Proposed Project ROW is adjacent to or crosses military land, including the three FUDS listed in Table D.10-1, unanticipated soil contamination could exist. Possible types of contamination include gasoline and diesel fuel residuals, heavy metals, and/or other hazardous materials disposed of by the military. Although unanticipated contamination along the non-military portions of the Imperial Valley Link project ROW is unlikely due to the undeveloped nature of the surrounding areas, there is a potential for unknown contamination to have occurred along and near area roads due to illegal dumping or other historical activities (e.g., mining). SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition, no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore, Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a **Appoint individuals with correct training for sampling, data review, and regulatory coordination.** In the event that potential contaminated soil or groundwater is encountered, samples shall be collected by an OSHA-trained individual with a minimum of 40-hours hazardous material site worker training. Laboratory data from suspected contaminated material shall be reviewed by the contractor's Health and Safety Officer and/or SDG&E's Field Environmental Representative and they shall coordinate with the appropriate regulatory agency (RWQCB or local CUPA agency) if contamination is confirmed to determine the suitable level of worker protection and the necessary handling and/or disposal requirements.

P-3b **Documentation of compliance with measures for encountering unknown contamination.** If during grading or excavation work, the contractor observes visual or

olfactory evidence of contamination in the exposed soil a report of the location and the potential contamination, results of laboratory testing, recommended mitigation (if contamination is verified), and actions taken shall be submitted to the CPUC and BLM (if on BLM lands) for each event. This report shall be submitted within 30 days of receipt of laboratory data.

Impact P-4: Unexploded ordnance encountered during construction could explode and injure workers or the public (Class III)

The Imperial Valley Link route crosses adjacent to Department of Defense land that has been used for bombing and weapons training for many decades. The Proposed Project route passes adjacent to and through (see Table D.10-1) areas that were used for historic bombing and weapons training in the mid-1940s and have known unexploded ordnance scattered throughout the sites. Excavation for tower foundations or grading for access roads could encounter unexploded ordnance, resulting in death or injury to workers or the public. In order to reduce potential health hazards related to exposure to UXO, prior to the start of construction, SDG&E would perform a survey of identified FUDS database sites as well as other areas along the project transmission line ROW with historical military activities. The survey would include identification of potential UXO locations, from which a determination of what possibly would be present shall be made. After the survey is completed, the appropriate contractor shall arrange for extensive survey of identified location(s) and the removal of any UXO, if found (SDG&E, 2006). Trained experts shall be used to investigate and remove unexploded ordnance in known and potential military areas prior to the start of construction (HS-APM-6). In addition, the UXO contractor shall provide training to construction contractor's personnel involved in grading and excavation-related to the identification of UXO prior to start of work (HS-APM-7). Identification and removal of UXO prior to construction and training to recognize UXO would ensure that the impact would be less than significant (Class III).

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials at the substations during facility operations or during maintenance of the transmission line, towers, and other associated transmission components. This could result in exposure of the facility, maintenance workers, and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the ROW. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. The vegetation removal program, known as “polebrushing,” uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures as a fire-prevention measure. SDG&E and their contractor’s follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns, which are summarized in Table D.10-8 (SDG&E, 2006).

Table D.10-8. Summary of SDG&E’s Herbicide Application Protocol

Protocol Number	Summary of Required Actions	Protocol Number	Summary of Required Actions
1	Herbicide Selection: <ul style="list-style-type: none"> • Use herbicides from approved list, with selections, mixtures, and dilutions that have been provided by the Pest Control Advisor. 	4c	Application Prohibitions: <ul style="list-style-type: none"> • Procedures to avoid humans and domestic animals include not allowing herbicides to contact humans or domestic animals, areas routinely used such as yard and pens, not allowing herbicides to contact or drift onto food crops, drinking water, or feed storage areas. • Avoiding harming wildlife and valued vegetation by not spraying herbicides directly on wildlife, if nests or dens are observed only used products identified as non-toxic to birds and small mammals, and if spraying in areas where grazing occurs apply in accordance to directions and any Dept. of Agriculture regulations. • Avoiding harming aquatic wildlife, valued vegetation, and chemical runoff by not spraying herbicides into roadside drainage channels with water present, not applying herbicides within 50 feet of any surface water-body when water is present, not applying to vernal pool or mima mound complex areas, and by not applying within 50 feet of any well head. • To avoid chemical runoff and contamination of non-target areas do not apply herbicides if it is raining, rain is imminent, the site is being irrigated, or the target area has puddles or standing water. Additionally, do not apply herbicides to sloped target areas with slopes steeper than 1:1. • To avoid chemical drift onto non-target areas do not apply herbicides when wind velocity exceeds 10mph, if spray is observed to be carrying sideways discontinue spraying until conditions causing the drift have abated.
2	Contract Personnel Qualifications: <ul style="list-style-type: none"> • The contractor to be selected for application of the herbicides must have all the appropriate state and local herbicide applicator licenses and comply with all state and local regulations regarding herbicide use. • Supervisory personnel must be familiar with the application sites and monitor herbicide application at these sites. • All personnel applying herbicides must have documented training complying with all federal, state, or local regulations and ordinances. 		
3	Application Mixture: The herbicides shall be applied and mixed based on recommendations of the Pest Control Advisor and the product manufacturer’s directions.		
4a	Pre-Field Procedures: <ul style="list-style-type: none"> • Use and notification protocols including use of only approved herbicides in targeted areas that have been approved by the Utility Vegetation Management Team, and follow contract clauses for notifying customers. • Provide hazard information to application crews including Material Safety Data Sheets (MSDS) for all crew hazardous material and herbicide inventories, herbicide application instructions, recommendations, local hospital information, and provide personal 		

Table D.10-8. Summary of SDG&E's Herbicide Application Protocol

Protocol Number	Summary of Required Actions	Protocol Number	Summary of Required Actions
	<p>protective equipment and emergency supplies for the application crew.</p> <ul style="list-style-type: none"> • Mixing of chemicals and loading of vehicles must be conducted prior to entering the field. All vehicles should be equipped with Spill Kits. • Minimize chemical usage by only amount adequate to do the job and minimize overlap spray. • Ensure spray equipment is calibrated and inspected to maintain proper functioning. • Safety equipment and information shall be provided to crews and include splash protection clothing and gear, chemical resistant gloves, chemical spill/splash wash supplies, and MSDS for all materials to be used on the job. 	4d	<p>In-Field Application procedures:</p> <ul style="list-style-type: none"> • Complete all pre-application checks and apply herbicides only when site evaluation checks are acceptable. Record any prohibited areas or adverse conditions. • Avoid additional environmental impacts by not scattering or stacking vegetation waste in any surface water-body or drainage canal, do not fuel or maintain vehicles or equipment within 100 feet of any water-body, avoid tracking mud from vehicles onto paved roadways, and never dump excess pesticides onto the ground or into nearby drains.
4b	<p>In-Field Initial Procedure:</p> <ul style="list-style-type: none"> • Prior to application of any chemicals the physical and climatic setting of the target area must be evaluated and the weather must be checked daily. • Set up work area at the target locations to minimize environmental disturbance and if applicable mechanically remove appropriate vegetation in the target area before herbicide application. 	5	<p>Post-Application Protocols: Spray tanks to be cleaned shall be cleaned at the contractor's yard and shall be appropriately reused, unused herbicide shall be stored and disposed of according to the manufacturer's label and excess pesticides and containers shall be returned to the contractor's yard. After application fill out all the required describing pesticide application performed for each site.</p>
		6	<p>Environmental Accident Procedures:</p> <ul style="list-style-type: none"> • In the event of a spill apply absorbent material, after the appropriate amount of time place material and affected media into a hazardous material holding container, and call the appropriate Utility contact. • In the event of accidental spray of any prohibited feature of wildlife, notify the supervisor immediately, who shall in turn report the incident to SDG&E Vegetation Control management as soon as feasible (within 24 hours).

Source: Summarized from SDG&E Herbicide Application Protocol (SDG&E, 2006)

The herbicides used by SDG&E and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicides are applied by hand sprayer to limit the chemical to within 10 feet of the structures (SDG&E, 2006).

Table D.10-9. Herbicides Used for Vegetation Control in the Proposed Project ROW

Herbicide Name	Toxicity	Carcinogenicity	Persistence in Soil (Half-life in Soil)
Chlorsulfuron	Very low to low toxicity if accidentally eaten, or residues touched or inhaled; mild eye and skin irritant	No evidence to cause cancer	Moderately persistent (1 to 3 months)
Dichlobenil	Very low to low toxicity if accidentally eaten or inhale residues; moderate toxicity if touched; does not irritate skin or eyes	Possible human carcinogen	Moderately persistent (2 months)
Diuron	Slightly toxic	No evidence to cause cancer	Moderately to highly persistent (1 to 12 months)
Oxyfluorfen	Practically non-toxic by ingestion; slight toxicity by dermal contact	Not carcinogenic	Moderately persistent (1 to 1.5 months)
Pendimethalin	Slightly to practically non-toxic by ingestion and by dermal contact	Not carcinogenic	Moderately persistent (1.5 months)
Sethoxydim	Slightly toxic by ingestion; practically non-toxic by dermal contact	Not carcinogenic	Low persistence (5 to 25 days)
Tebuthiuron	Low to moderate toxicity when ingested; slight to low toxicity by skin exposure	Not carcinogenic	Highly persistent (12 to 15 months)
Triclopyr	Slightly toxic; can cause eye irritation	Unlikely to be carcinogenic	Moderately persistent (1 to 3 months)

Source: Washington State Department of Transportation; EXTTOXNET.

This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas; however, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would be minimized by following the manufacturer’s recommendations for mixing and applying the chemical, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E’s application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public, the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is a less than significant impact (Class III).

Modifications to Imperial Valley Substation

Construction Impacts

The Imperial Valley Substation is surrounded by undeveloped open space and construction is expected to occur within the existing fenced area of the substation property. Therefore, no impacts from residual herbicide or pesticide contamination (Impact P-2), encountering UXO (Impact P-4), or existing environmentally contaminated sites are expected (Impact P-7).

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils and paints would be used and stored during construction at the substation (see Table D.10-7), resulting in a potential for environmental contamination due to improper handling and/or storage of hazardous materials. APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste), would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Although no known environmental contamination exists at the Imperial Valley Substation, there is a small potential that contamination from unknown spills or leaks that may have occurred in the past could have created localized soil contamination (EDR, 2006a). SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, these measures do not specify any requirements for reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC or CUPA, therefore Mitigation Measure P-3a and P-3b are required to ensure that these measures are properly implemented, reducing the impact from unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials at the substations during facility operations. Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance of the new equipment at

the substation facilities. This could result in exposure of facility workers and the public to hazardous materials and degradation of the environment. In addition, mineral oil would be used in the new transformers, switches, circuit breakers, capacitors, and other electrical equipment at the upgraded electrical substations (PEA, 2006). Mineral oil is considered a hazardous material under federal regulations (CWA Section 311) and mineral oil storage or use in aboveground storage containers in levels exceeding 660 gallons in a single oil storage tank or greater than 1,320 gallons in one or multiple containers at a site is regulated under Title 40, CFR, 112—the “SPCC rule” which is part of the federal CWA. Increased mineral storage at the site would require an SPCC Plan update or modification for the existing Imperial Valley Substation (PEA, 2006). In addition, modifications at Imperial Valley Substation may require new or revised Hazardous Material Business Plans and Hazardous Communication Plan for the facility. SDG&E would implement APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

D.10.6 Anza-Borrego Link Impacts and Mitigation Measures

Impacts P-2 (encountering residual pesticides or herbicides) and P-4 (encountering unexploded ordnance) would not occur in the Anza-Borrego Link as there are not agricultural nor military lands along/adjacent to the Proposed Project route. Therefore, these impacts are not addressed in this section.

Construction Impacts

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction, creating a potential for soil contamination from improper handling, spills, or leaks, a significant impact. Additionally, along the Anza Borrego Link alignment, helicopters may be used to support construction activities in areas where access is limited or where there are environmental constraints to accessing the project area with standard construction vehicles and equipment. SDG&E has stated that helicopters would be used to construct 41 towers from MP 77.9 to 83.5. All helicopter construction and maintenance activities would occur at a fly yard of approximately 10 to 15 acres, located within a 4 to 8 minute flight distance. The anticipated locations of the proposed helicopter fly yards are shown in Chapter B Project Description, Figures B-3 through B-9. Refueling activities for the helicopters could result in soil contamination from improper handling and storage of helicopter fuel at the staging areas or during refueling, a significant impact. SDG&E’s APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E’s and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program)

and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Excavation would occur in small areas at and near transmission structures and also within State Route 78, where the existing 92 and 69 kV lines would be moved underground along about a 7-mile segment of the Proposed Project. There would be continuous trenching within or adjacent to SR78 along this segment during construction. Due to the undeveloped nature of the area and State Park status in this portion of the proposed alignment, no existing or unknown environmentally contaminated sites are expected. However, there is a potential for unknown contamination to have occurred along and near the area roads due to illegal dumping or near the Narrows Substation. The potential to encounter unknown environmental contamination is a significant impact. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM. Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from an accidental spill or release of hazardous materials along the transmission alignment during maintenance operations. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil

and/or groundwater. SDG&E would reduce these impacts in the Anza Borrego Link with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. The vegetation removal program, known as Polebrushing, uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures. SDG&E and their contractor's follow an Herbicide Application Protocol, as summarized in Table D.10-8, to prevent environmental hazards and safety and health concerns. The herbicides used by SDG&E and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right-of-way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public, the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is a less than significant impact (Class III).

D.10.7 Central Link Impacts and Mitigation Measures

Construction Impacts

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks, a significant impact. In addition, along Central Link alignment, helicopters may be used to support construction in areas where access is limited or where there are environmental constraints to accessing the project area with standard construction vehicles and equipment. Helicopter construction would occur for towers between MP 92.6 and MP 97.6, and between MP 100.2 and MP 103.5. All helicopter construction and maintenance activities would be based at a fly yard. The anticipated locations of the proposed helicopter

fly yards are shown in Chapter B Project Description, Figures B-3 through B-9. Refueling activities for the helicopters could result in soil contamination from improper handling and storage of helicopter fuel at the staging areas or during refueling, a significant impact. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Ground disturbance along the transmission line route for this link would be limited to excavation at and near transmission structures and grading of new access roads along and to the alignment. No impacts from existing environmentally contaminated sites are expected along this segment. Although unknown contamination along the Central Link project ROW is unlikely due to the relatively undeveloped nature of the surrounding area, there is a potential for unknown contamination to have occurred along and near roadways due to illegal dumping. The potential to encounter unknown environmental contamination is a significant impact. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM. Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials along the transmission alignment during maintenance operations. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. The vegetation removal program, known as Polebrushing, uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures. SDG&E and their contractor's follow a Herbicide Application Protocol to prevent environmental hazards and safety and health concerns, which is summarized in Table D.10-8. The herbicides used by SDG&E and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public, the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is a less than significant impact (Class III).

Proposed Central East Substation

Construction Impacts

The proposed Central East Substation site is located in undeveloped open space although the surrounding land contains low-density residential uses and one small commercial site (restaurant). No impacts

from existing environmentally contaminated sites (Impact P-7) are expected. Additionally, due to the undeveloped nature of the site no impacts from encountering unknown contamination (Impact P-3) are expected.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils and paints would be used and stored during excavation and grading of the site and actual construction at the substation facilities (see Table D.10-7), resulting in a potential for environmental contamination due to improper handling and/or storage of hazardous materials, a significant impact. APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste), would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials at the substation during operation and maintenance of substation facilities. This could result in exposure of facility workers and the public to hazardous materials and contamination of the soil and/or groundwater. Mineral oil would be used in the new transformers, switches, circuit breakers, capacitors, and other new electrical equipment (PEA, 2006). Mineral oil is considered a hazardous material under federal regulations (CWA Section 311), and mineral oil storage or use in aboveground storage containers in levels exceeding 660 gallons in a single oil storage tank or greater than 1,320 gallons in one or multiple containers at a site is regulated under Title 40, CFR, 112—"the SPCC rule" which is part of the federal Clean CWA. The new Central East Substation will require new Hazardous Material Business Plans, including a Hazardous Communication Plan, Spill Response Plan, Temporary Storage and Disposal facility permit, and SPCC Plan for the facility. SDG&E would reduce potential impacts from accidental spill or release with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to

the environment and workers. This would result in an adverse but less than significant impact (Class III).

D.10.8 Inland Valley Link Impacts and Mitigation Measures

Construction Impacts

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities (see Table D.10-7), resulting in a potential for soil contamination from improper handling, spills, or leaks, a significant impact. Additionally along the Inland Valley Link alignment, helicopters may be used to support construction activities in areas where access is limited or where there are environmental constraints to accessing the project area with standard construction vehicles and equipment from MP 123.4 to 136.3. All helicopter construction activities would be based at a fly yard, which is a project-material staging area. The anticipated locations of the proposed helicopter fly yards are shown in Chapter B Project Description, Figures B-3 through B-9. Refueling activities for the helicopters could result in soil contamination from improper handling and storage of helicopter fuel at the staging areas or during refueling (Impact P-1), a significant impact. APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste), would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Ground disturbance along the transmission line route for the overhead portion of this link would consist primarily of excavation at and near transmission structures and grading of new access roads along and to the alignment. Ground disturbance for the underground portion would require excavation of trenches for the duct banks and associated vaults, varying from 7 to 12 feet in width and 6 to 11 feet in depth. No known existing environmentally contaminated sites have been identified along this segment; however, the underground portion of the alignment in Gunn Stage Road and San Vicente Road would pass near identified hazardous material sites (see Table D.10-3), resulting in a potential to encounter unknown contamination during construction. Unknown contamination may be present in developed areas near the ROW and in remote area roads due to illegal dumping, which would be a significant impact. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to

reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM. Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Impact P-4: Unexploded ordnance encountered during construction could explode and injure workers or the public (Class III)

A portion of the ROW in this link (between approximately MP 134.15 and the existing Sycamore Canyon Substation) is located within the northern edge of the Marine Corps Air Station Miramar (MCAS) boundary. Historically areas of Miramar have been used for bombing and munitions testing, creating a potential to encounter unexploded ordnance during project excavations, resulting in death of injury to workers or the public, a significant impact. In order to reduce potential health hazards related to exposure to UXO, prior to the start of construction, SDG&E would perform a survey of identified FUDS database sites as well as other areas along the project transmission line ROW with historical military activities. The survey would include identification of potential UXO locations, from which a determination of what possibly would be present shall be made. After the survey is completed, the appropriate contractor shall arrange for extensive survey of identified location(s) and the removal of any UXO, if found (SDG&E, 2006). Trained experts shall be used to investigate and remove unexploded ordnance in known and potential military areas prior to the start of construction (HS-APM-6). In addition, the UXO contractor shall provide training to construction contractor's personnel involved in grading and excavation-related to the identification of UXO prior to start of work (HS-APM-7). Identification and removal of UXO prior to construction and training to recognize UXO would ensure that the impact would be less than significant (Class III).

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials along the transmission alignment during maintenance operations. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or

groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. The vegetation removal program, known as Polebrushing, uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures. SDG&E and their contractor's follow a Herbicide Application Protocol to prevent environmental hazards and safety and health concerns, which is summarized in Table D.10-8. The herbicides used by SDG&E and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public, the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is a less than significant impact (Class III).

D.10.9 Coastal Link Impacts and Mitigation Measures

Construction Impacts

Impact P-2 (encountering residual pesticides or herbicides) would not occur in the Coastal Link as there are not agricultural lands along or adjacent to the Proposed Project route. Therefore, this impact is not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks, a significant impact. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the

chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Ground disturbance along the overhead portion of this link would consist primarily of excavation at and near transmission structures and grading of new access roads along and to the alignment. Ground disturbance for the underground portion would be more significant, requiring excavations of trenches for the duct banks and associated vaults, varying from 7 to 12 feet in width and 6 to 11 feet in depth. This segment passes through and near commercial and light industrial areas and within 0.25 miles of several listed hazardous material sites that use, store, and dispose of significant quantities of hazardous materials (see Table D.10-4). Therefore, there is the potential to encounter unknown soil contamination during construction in and near the project ROW due to unreported spills or illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM. Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Impact P-4: Unexploded ordnance encountered during construction could explode and injure workers or the public (Class III)

New transmission towers near the existing Sycamore Canyon Substation are located within and near the northern edge of MCAS Miramar. Historically, areas of the Station have been used for bombing and munitions testing, creating the potential to encounter unexploded ordnance during project excavations that could result in death or injury to workers or the public. This would be a significant impact. In order to reduce potential health hazards related to exposure to UXO, prior to the start of construction, SDG&E would perform a survey of identified FUDS database sites as well as other areas along the project transmission line ROW with historical military activities. The survey would include identification of potential UXO locations, from which a determination of what possibly would be present shall be made. After the survey is completed, the appropriate contractor shall arrange for extensive survey of identified location(s) and the removal of any UXO, if found (SDG&E, 2006). Trained experts shall be used to investigate and remove unexploded ordnance in known and potential military areas prior to the start of construction (HS-APM-6). In addition, the UXO contractor shall provide training to construction contractor's personnel involved in grading and excavation-related to the identification of UXO prior to start of work (HS-APM-7). Identification and removal of UXO prior to construction and training to recognize UXO would ensure that the impact would be less than significant (Class III).

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II)

Several LUST sites have been identified along the Coastal Link alignment, primarily near the proposed underground segment. Most of the sites are listed as "case closed" with the exception of Shell Service Station #12/Exxon #1039 at 12929 Rancho Peñasquitos Drive in San Diego, listed as undergoing pollution characterization (EDR, 2006a). It is located approximately 1,600 feet south of the underground portion and about 170 feet west of the overhead portion of the alignment. The presence of this known contaminated site near the alignment presents a potential for contaminated soil and/or groundwater to have migrated to the project ROW and thus be encountered during construction, a significant impact. SDG&E will implement APMs HS-APM-5 and HS-APM-10 to reduce impacts from known contaminated sites. HS-APM-5 requires that SDG&E investigate all Government Code §65962.5 sites that along the project ROW that could potentially impact the project. HS-APM-10 requires that all hazardous waste be stored and disposed of in accordance with federal, State, and local requirements.

Nevertheless, environmental impacts would still be significant if contaminated sites near the project ROW were not adequately characterized and contamination from these areas has migrated to the soil or groundwater within the project ROW. In order to reduce potential health hazards related to exposure of construction personnel and/or the public to hazardous materials in the soil, groundwater, or surface water to less than significant, SDG&E will implement Mitigation Measure P-7a (Evaluate contaminated sites). This four step mitigation measure will reduce environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-7a Evaluate contaminated sites. SDG&E shall implement the following steps, all steps be completed at least 90 days prior to project construction, to prevent mobilization of contaminants and exposure of workers and the public:

- **Step 1.** Investigate the site to determine whether it has a record of hazardous material contamination which would affect construction activities. This investigation should be performed as a Phase I – Environmental Site Assessment (ESA). If contamination is found

that could potentially affect the health and safety of workers or the public during construction of the Proposed Project, proceed to Step 2.

- **Step 2.** Perform a characterization study of the site to determine the nature and extent of the contamination present at the location before construction activities proceed within the project ROW near the suspect site.
- **Step 3.** Determine the need for further investigation and/or remediation of the soil or groundwater conditions at or near the contaminated site, i.e., within areas of ground disturbance for the Proposed Project. (For example, if there would be little or no contact with contaminated materials, industrial cleanup levels would likely be applicable. If site activities would involve human contact with the contaminated materials, such as would be the case with excavation of contaminated materials during project construction, then Step 4 shall be completed. If no human contact is anticipated, then no further mitigation would be required for the location.)
- **Step 4.** If it is determined that disturbance or excavation of soils or groundwater with contamination would accompany construction at the site, undertake a Phase II Environmental Site Investigation (Phase II ESI) involving sampling and further characterization of potentially contaminated areas with the project ROW or reroute the line away from the contamination area. Should further investigation reveal high levels of hazardous materials, mitigate health and safety risk according San Diego County CUPA or RWQCB regulations or requirements. This would include site-specific Health and Safety Plans, Work Plans, and/or Remediation Plans.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials along the transmission alignment during maintenance operations (Impact P-5). This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. The vegetation removal program, known as Polebrushing, uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and struc-

tures. SDG&E and their contractor's follow a Herbicide Application Protocol to prevent environmental hazards and safety and health concerns, which is summarized in Table D.10-8. The herbicides used by SDG&E and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public, the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is a less than significant impact (Class III).

Modifications to Sycamore Canyon Substation

Construction Impacts

The Sycamore Canyon Substation is located on Miramar MCAS, adjacent to a newly developing residential area, and construction is expected to occur within the existing fenced area of the substation property. Therefore, no impacts are expected from residual herbicide or pesticide contamination (Impact P-2), unknown environmentally contaminated sites (Impact P-3), or existing environmentally contaminated sites (Impact P-7).

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils and paints would be used and stored during construction at the substation (see Table D.10-7), which results in a potential for environmental contamination due to improper handling and/or storage of these materials. APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste), would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-4: Unexploded ordnance encountered during construction could explode and injure workers or the public (Class III)

Although construction within the existing boundaries of Sycamore Canyon Substation is not anticipated to encounter unexploded ordnance, the proximity of the Miramar Air Station boundary should be recognized. Historically, areas of the Miramar Station have been used for bombing and munitions testing, creating the potential to encounter unexploded ordnance during project excavations that could result in death of injury to workers or the public, a significant impact. In order to reduce potential health hazards related to exposure to UXO, prior to the start of construction, SDG&E indicates that they would perform a survey of identified FUDS database sites as well as other areas along the project transmission line ROW with historical military activities. The survey would include identification of potential UXO locations, from which a determination of what possibly would be present shall be made. After the survey is completed, the appropriate contractor shall arrange for extensive survey of identified location(s) and the removal of any UXO, if found (SDG&E, 2006). Trained experts shall be used to investigate and remove unexploded ordnance in known and potential military areas prior to the start of construction (HS-APM-6). In addition, the UXO contractor shall provide training to construction contractor's personnel involved in grading and excavation-related to the identification of UXO prior to start of work (HS-APM-7). Identification and removal of UXO prior to construction and training to recognize UXO would ensure that the impact would be less than significant (Class III).

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials at the substation during operation and maintenance of substation facilities. This could result in exposure of facility workers and the public to hazardous materials and degradation of the environment. In addition, the modifications at Sycamore Canyon Substation may require new or revised Hazardous Material Business Plans and Hazardous Communication Plan for the facility. SDG&E would reduce potential impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Modifications to Peñasquitos Substation

Construction Impacts

The Peñasquitos Substation is located in a relatively undeveloped area surrounded by residential areas, and construction is expected to occur within the existing fenced area of the substation property. No impacts from residual herbicides or pesticides (Impact P-2), encountering unexploded ordnance (UXO) (Impact P-4), and existing or unknown environmentally contaminated sites (Impacts P-7 and P-3, respectively) are expected within the fenced boundary of the substation.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils and paints would be used and stored during construction at the substation (see Table D.10-7), which results in a potential for environmental contamination due to improper handling and/or storage of these materials. APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste), would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials at the substation during operation and maintenance of substation facilities. This could result in exposure of facility workers and the public to hazardous materials and degradation of the environment. In addition, the modifications at the Peñasquitos Substation may require new or revised Hazardous Material Business Plans and Hazardous Communication Plan for the facility. SDG&E would reduce potential impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

D.10.10 Other System Upgrades – Impacts and Mitigation Measures

Reconductor Sycamore Canyon to Elliot 69 kV Line

The reconductoring of this existing transmission line would require access road improvements, replacement of 11 existing poles, replacement of porcelain insulators with polymer insulators, and replacement of the conductors. All of the construction would be within the existing ROW. No impacts from residual herbicide or pesticide contamination (Impact P-2), unexploded ordnance (UXO) (Impact P-4), or exist-

ing environmentally contaminated sites (Impact P-7) are expected. Because this project is an upgrade of an existing transmission line no new impacts would be associated with continued operation of this line.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils and paints would be used and stored during construction at the substation (see Table D.10-7), which results in a potential for environmental contamination due to improper handling and/or storage of these materials. APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste), would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Ground disturbance for regrading of access roads and excavations for pole replacement could potentially encounter unknown soil contamination during construction in and near the project ROW due to unreported spills or illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM. Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**

P-3b **Documentation of compliance with measures for encountering unknown contamination.**

Modifications to San Luis Rey Substation

The proposed upgrades at the existing San Luis Rey Substation would include installation of a third 230/69 kV transformer, 230 kV capacitor and associated equipment that would be similar to the respective structures and equipment already in place at the substation. All construction activities and associated equipment would be within the existing substation fence on previously disturbed areas. No impacts from residual herbicide or pesticide contamination (Impact P-2), unexploded ordnance (UXO) (Impact P-4), or existing or unknown environmental contamination (Impacts P-7 and P-3, respectively) are expected within the fenced boundaries of the substation property.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils and paints would be used and stored during construction at the substation (see Table D.10-7), which results in a potential for environmental contamination due to improper handling and/or storage of these materials. APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste), would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a **Implement Environmental Monitoring Program.**

P-1b **Maintain emergency spill supplies and equipment.**

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance at the substation where new the equipment has been installed. This could result in exposure of facility workers and the public to hazardous materials and degradation of the environment. In addition, the modifications at the San Luis Rey Substation may require new or revised Hazardous Material Business Plans and Hazardous Communication Plan for the facility. SDG&E would reduce potential impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential

for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Modifications to South Bay Substation

Modifications at the existing South Bay Substation include installation of a new shunt capacitor and associated equipment including a switch rack, a circuit breaker, a capacitor bank with associated reactors and surge arrestors, two disconnect switches, and the required protection relay panels. The new structures and equipment would be similar to the respective structures and equipment already in place at the substation. All construction-related activities and equipment would be contained within the existing substation property on previously disturbed areas.

No impacts from residual herbicide or pesticide contamination (Impact P-2), unexploded ordnance (UXO) (Impact P-4), or existing or unknown environmental contamination (Impacts P-7 and P-3, respectively) are expected within the fenced boundaries of the substation property.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils and paints would be used and stored during construction at the substation (see Table D.10-7), which results in a potential for environmental contamination due to improper handling and/or storage of these materials. APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste), would be included as part of the project in order to reduce the likelihood of spills. However, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance at the substation where new the equipment has been installed. This could result in exposure of facility workers and the public to hazardous materials and degradation of the environment. In addition, the modifications at the San Luis Rey Substation may require new or revised Hazardous Material Business Plans and Hazardous Communication Plan for the facility. SDG&E would reduce potential impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans

associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

D.10.11 Future Transmission System Expansion

The Proposed Project would facilitate the possible future construction of additional 230 kV and 500 kV transmission lines. These lines are not proposed at this time, but because the construction of the Proposed Project would include a substation and create new transmission corridors that could be used by these additional circuits, impact analysis is presented in this EIR/EIS.

The potential for environmental contamination along future transmission lines is estimated based on current conditions and database searches conducted for this project. However, if several years pass before construction of additional 230 kV lines, the status of current known hazardous materials sites may have changed and new sites may exist along the alignment corridors. Therefore, the presence of identified contaminated sites along a future alignment in current environmental databases is not a guaranty that the conditions at these sites will not have changed and that new sites will not be identified in the future. New database searches/reviews would need to be completed for proposed future transmission alignments if more than 2 years have passed since the last database review was conducted.

D.10.11.1 Environmental Setting – 230 kV Future Transmission System Expansion

Central East Substation to Sycamore Canyon or Peñasquitos Substation

As described in Section B.2.7, the Central East Substation that would be built as a part of the Proposed Project would accommodate up to six 230 kV circuits. Only two circuits are proposed by SDG&E at this time, but construction of additional 230 kV circuits out of the Central East Substation may be required within the next 10 years. This section considers the impacts of construction and operation of these potential future transmission lines. Based on information provided by SDG&E, there are four substation endpoints and five routes that would be most likely for these future lines; each is addressed below. Figure B-12a illustrates the potential routes of each of the 230 kV transmission lines.

The new 230 kV line would most likely follow the Proposed Project route from the Central East Substation to Sycamore Canyon Substation or Peñasquitos Substation. Therefore, the environmental setting for the new 230 kV line would be generally the same as for the Proposed Project. However, depending on the amount of time that passes before construction of additional 230 kV lines, the status of known hazardous materials sites may change and new sites may exist along the alignment corridors. New EDR database search/reviews would need to be completed for the corridor alignments if more than 2 years have passed since the last EDR database search/review was conducted.

Central Link

The Central Link traverses largely undeveloped mountain and valley terrain. The Proposed Project includes construction of the new Central East Substation. The area is distinctly rural. Minor commercial and residential development at Santa Ysabel is located about 0.5 miles east of the Central Link

alignment where it crosses SR78. The new 230 kV line along the Proposed Project alignment crosses SR76 and SR79 at MP 100, and SR78 at MP 108.5. From MP 100 to 109.5 the 230 kV FTSE line would diverge from SRPL and follow the Santa Ysabel Existing ROW Alternative as described in Section D.10.16.1. This is an overhead alignment that would be traverse along the eastern edge of the Santa Ysabel Valley crossing through scattered rural residential and undeveloped open ranch land.

Based on review of the EDR databases search, there are three hazardous material sites within 0.25 miles of the 230 kV FTSE segment that follows the Santa Ysabel Existing ROW Alternative route with potential to impact the project (EDR, 2006a and 2007e). These sites are summarized in Tables D.10-2 (Site 1 only) and D.10-9 (both sites).

Inland Valley Link

The Inland Valley Link traverses mountain and valley terrain and skirts south of the urbanized area of Ramona and passes through the residential area of San Diego Country Estates. The new 230 kV line along the Proposed Project route is both overhead and underground construction. The underground segment from MP 117.2 to 121.2 would be located beneath gravel and paved roads in San Diego Country Estates and pass near the commercial center located at the intersection of Gunn Stage Road and San Vicente Road. The Inland Valley Link then continues overhead through rural low-density residential areas in the mountain areas north of San Vicente Reservoir and crosses SR67 at MP 131.9. From SR76 to the existing Sycamore Canyon Substation (MP 136.3), the overhead new 230 kV transmission line would be built within the existing SDG&E ROW that is located south of the new and rapidly urbanizing area centered along Scripps-Poway Parkway. Another possible 230 kV route segment would pass north of Creelman Substation and south to San Vicente Road in a rural low-density residential and agricultural area.

Based on review of the EDR database search, there are currently two hazardous material sites within 0.25 miles of the Inland Valley Link segment of the Future Expansion along the Proposed Project route with potential to impact the project (EDR, 2006a). These sites are summarized in Table D.10-3.

Coastal Link

The Coastal Link project components include the construction of a new 230 kV line from the existing Sycamore Canyon Substation to the existing Peñasquitos Substation. The Coastal Link consists of both overhead and underground segments principally within existing SDG&E ROW. The Sycamore Canyon Substation is located at the northern edge of the Marine Corps Air Station Miramar boundary. The segment from Sycamore Canyon Substation (MP 136.3) to the start of the underground portion (MP 142.3) traverses ridge and valley areas within the existing ROW passing through residential areas and areas of minor commercial and light industrial uses near where the alignment crosses Scripps Poway Parkway. The underground portion is located within an existing SDG&E ROW between MP 142.3 and MP 143.9 and then follows an existing ROW built for the Proposed Project along paved (Park Village Drive) and unpaved (existing trail within Los Peñasquitos Canyon Open Space Preserve) routes to MP 146.6. The underground portion traverses predominantly residential areas and the undeveloped area within the Preserve. The final overhead segment traverses undeveloped ridge and valley areas and locally the existing ROW is adjacent to new residential areas.

Based on review of the EDR database search, there are 13 hazardous material sites within 0.25 miles of the Coastal Link segment of the Future Expansion along the Proposed Project route with potential to impact the project (EDR, 2006a). These sites are summarized in Table D.10-4.

Central East Substation to Mission Substation

The new 230 kV line would most likely follow the Proposed Project route from the Central East Substation to the Sycamore Canyon Substation. Therefore, the environmental setting for the future 230 kV line would be generally the same as for the Proposed Project from these locations. However, depending on the amount of time that passes before construction of additional 230 kV lines, the status of known hazardous materials sites may change and new sites may exist along the alignment corridors. New database searches/reviews would need to be completed for the corridor alignments if more than 2 years have passed since the last database review was conducted.

At the Sycamore Canyon Substation, the 230 kV line would turn southwest and would most likely follow an existing 69 kV transmission line corridor that runs between Sycamore Canyon and Elliot Substations. Approximately 6.0 miles of grazing land are associated with the existing 69 kV transmission line corridor between the Sycamore Canyon and Elliot Substations. Installation of a future 230 kV line between the Sycamore Canyon and Elliot Substations would occur entirely on undeveloped land under the jurisdiction of the Department of Defense (i.e., MCAS Miramar). Where the alignment crosses MCAS Miramar property there is a risk of encountering unexploded ordnance, as many of the undeveloped areas of the base were historically used for munitions testing. From Elliot Substation, the route would continue southwest for an additional 4.0 miles within the existing 69 kV corridor, through Mission Trails Regional Park, and crossing I-15 to terminate at the existing Mission Substation, located at 9060 Friars Road, which is 0.9 miles north of I-8 and 0.25 miles east of I-805.

Database Search. New EDR databases search were obtained and reviewed for the Central East Substation to Mission Substation FTSE project elements. Based on review of the EDR database search, there are numerous contaminated sites or hazardous material sites within 0.25 miles of the 230 kV segment from Sycamore Substation to Mission Substation with potential to impact the project (EDR, 2007k and 2007l). These sites are summarized in Table D.10-10.

Table D.10-10. Identified Hazardous Material Sites within 0.25 Miles of the Central East Substation to Mission Substation Transmission Line (Sycamore Canyon Substation to Mission Substation)

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
114	Sycamore Canyon Landfill & Buy Back Center	14494 Mast Blvd., San Diego	HAZNET	Large quantities of waste oil recycled.
119	Daley Corp; Stadium Golf Center; Murphy Canyon Gravel Plant	2400 Murphy Canyon Road, San Diego	LUST, UST, HIST UST, SD CO. HMMD	19 USTs containing diesel, waste oil. LUST case closed 1993.
122	Texaco USA Sales Terminal	9966 San Diego Mission Road, San Diego	Cortese	
122	SFPP Mission Valley Terminal, Kinder Morgan, San Diego Pipeline Co., Southern Pacific Pipeline Co., Mobil Oil Corp., Shell Oil Products, Powerine, Castle Energy Corp, Exxon-Mobil, TOSCO	9950 San Diego Mission Road, San Diego	HAZNET, UST, HIST UST, SD CO. HMMD	Major petroleum tank farm and terminal, numerous spills and leaks related to tanks and transfer activity to truck tankers.

Table D.10-10. Identified Hazardous Material Sites within 0.25 Miles of the Central East Substation to Mission Substation Transmission Line (Sycamore Canyon Substation to Mission Substation)

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
122	Texaco USA, Southern Pacific Pipeline Partners	9966 San Diego Mission Road, San Diego	LUST, UST, HIST UST, SWEEPS UST, SD CO. HMMMD, SD CO. SAM	5 USTs, groundwater and soil contamination, case closed 2001.
123	QUALCOMM Stadium	9449 Friars Road, San Diego	LUST, UST, SWEEPS UST	Soil only, case closed. 4 USTs diesel and fuel. Site is distant and downgradient.
125	H.G. Fenton Materials Co.	9310 Friars Road, San Diego	LUST	Case closed, 1993 and 2000, Site now occupied by a residential development

Source:(EDR, 2007k)

1 EDR Environmental Information Data Site I.D.

2 See Appendix 13 for Detailed Description of Regulatory Agency Listings.

FEDERAL RECORDS

RCRA-LQG: Resource Conservation and Recovery Act Information. Large Quantity Generator

FINDS: Facility Index System/Facility Registry System, contains both facility information and 'pointers' to other sources that contain more detail.

STATE AND LOCAL DATABASES

UST: Active UST Facilities, Active UST facilities gathered from the local regulatory agencies

HIST UST: Hazardous Substance Storage Container Database, a historical listing of UST sites.

SWEEPS UST: Statewide Environmental Evaluation and Planning System, listing of USTs from 1980s.

LUST: Leaking Underground Storage Tank Incident Reports, contains an inventory of reported leaking underground storage tank incidents.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMMD: San Diego County Hazardous Materials Management Division Database

SD Co. SAM: Contains listing of all underground tank release cases and projects actively under review by the Site Assessment and Mitigation Program.

CORTESE: "Cortese" Hazardous Waste & Substances Sites List.

Approximately 2 miles of this 230 kV segment traverses DOD land on MCAS Miramar property and former Camp Elliott land on the east side of I-15 where unexploded ordinance may be present. Where there is any work near the Mission Valley Terminal, the primary refined petroleum products and fuel storage terminal for all of the San Diego metro area, that includes ground disturbance, it should be assumed that there is a potential to encounter known and unknown contamination due to the large number of leaks and spills at the facility.

Central East Substation to Los Coches Substation

The future 230 kV line would most likely follow the Proposed Project route from the Central East Substation to 1.0 mile south of the Creelman Substation in the Town of Ramona. Therefore, the environmental setting for the future 230 kV transmission line would be generally the same as for the Proposed Project from these locations. However, depending on the amount of time that passes before construction of additional 230 kV lines, the status of known hazardous materials sites may change and new sites may exist along this alignment corridor. New database searches/reviews would need to be completed for the corridor alignments if more than 2 years have passed since the last database review was conducted.

At MP 122.2, the future expansion 230 kV line could turn south following the existing Creelman-Lakeside 69 kV corridor through unincorporated San Diego County and then 1.6 miles through largely hilly open space on the Barona Reservation east of the San Vicente Reservoir and west of the Barona Creek Golf Club, the Barona Valley Resort and Casino, and Oak Oasis Open Space Preserve. The route

would then pass through or adjacent to Louis A. Stelzer County Park, cross the San Diego River and terminate at the existing Los Coches Substation 0.3 miles northwest of Lake Jennings near Lake Jennings County Park and the community of Lakeside.

Database Search. A new EDR database search was obtained and reviewed for the MP 122.2 to Los Coches Substation portion of the 230 kV alignment (EDR, 2007). Based on review of the EDR database search, there are only two contaminated sites or hazardous material sites within 0.25 miles of the proposed 230 kV segment with potential to impact the project. These sites are summarized in Table D.10-11. Five other sites include waste generators and active gas stations in the Lakeside area are separated by significant vertical relief down-gradient from the alignment and are not included in Table D.10-11.

Table D.10-11. Identified Hazardous Material Sites within 0.25 Miles of the Central East Substation to Los Coches Substation Transmission Line

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
1	David Madison Property	1865 Keyes Road, Ramona	LUST, CORTESE, SD CO. HMMD, SD CO. SAM	Soil only, case closed 1989.
6	Barona Gas Station	1054-C Ramona Road, Lakeside	UST	4 USTs.

Source: EDR 2007.

1 EDR Environmental Information Data Site I.D.

2 See Appendix 13 for Detailed Description of Regulatory Agency Listings.

STATE AND LOCAL DATABASES

UST: Active UST Facilities, Active UST facilities gathered from the local regulatory agencies

LUST: Leaking Underground Storage Tank Incident Reports, contains an inventory of reported leaking underground storage tank incidents.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

SD Co. SAM: Contains listing of all underground tank release cases and projects actively under review by the Site Assessment and Mitigation Program.

CORTESE: "Cortese" Hazardous Waste & Substances Sites List.

Central East Substation to Escondido Substation

Northern Route. From the proposed Central East Substation, the future 230 kV transmission line route would travel west through Vista Irrigation District land paralleling the proposed SRPL route for approximately 6.6 miles to its intersection with SR79. Therefore, the environmental setting for this segment of the future 230 kV transmission line would be generally the same as for the Proposed Project. However, depending on the amount of time that passes before construction of the new 230 kV line, the status of known hazardous materials sites may change and new sites may exist along this alignment corridor. New EDR database searches/reviews would need to be completed for the corridor alignments if more than 2 years have passed since the last database review was conducted.

At SR79 the line would diverge from the proposed SRPL route and would head north parallel to SR79 for approximately 1.2 miles to the intersection of Highway S2 with SR79 at the existing Warner Substation. From there the route would parallel the existing 69 kV corridor west across open space owned by Vista Irrigation District north of Lake Henshaw and then it would turn southwest, following the northwest edge of the lake to SR76.

At SR76 the route would turn west-northwest paralleling SR76 for 13.3 miles following the existing Warners-Rincon 69 kV transmission corridor across and/or bordering parcels of the Cleveland National Forest for approximately 4 miles and across La Jolla Reservation for 6 miles, crossing Cedar Creek, Plaisted Creek and Potrero Creek, and then into to Rincon Substation, which is just north of the Rincon Reservation at the Highway S6 (Valley Center Road) intersection with SR76. The hilly route along SR76 is primarily open space with scattered rural residences and minor agricultural use.

At Rincon Substation the route would diverge from SR76 and would follow the existing Rincon-Escondido 69 kV corridor, generally parallel to Highway S6 south, crossing Potrero Creek, San Luis Rey River and a tributary to Paradise Creek, through the Rincon Reservation for 3 miles passing through some medium density single family residential and commercial land uses. South of the Rincon Reservation, the route would turn west in the Valley Center Substation area generally paralleling Highway S6, passing on the west side of Hellhole Canyon County Open Space Preserve (approximately 0.30 miles from the ROW), and then would turn south on the east side of Highway S6 for 1.6 miles before turning southwest, crossing Highway S6, and entering the City of Escondido after approximately 0.75 miles. The new line could run adjacent to or cross Daley Ranch near Escondido, crossing a mix of undeveloped land, rural residences, irrigated or orchards and groves. In the City of Escondido, the route would turn south and then southwest for approximately 8 miles following the existing 69 kV corridor through primarily residential neighborhoods east of the I-15. The alignment would then cross the I-15 and head west and then south through light industrial scattered commercial land uses into the Escondido Substation, which is also located in an industrial area.

Database Search. A new EDR database search was obtained and reviewed for the Future Expansion 230 kV alignments from the intersection of SR79 and the SRPL to the Escondido Substation (EDR, 2007k). Based on review of the EDR database search, there are scattered contaminated and/or hazardous material sites within 0.25 miles of the proposed 23 segment with potential to impact the project in the rural areas between SR79 and I-15. These sites are summarized in Table D.10-12. However, in the Escondido area between I-15 and Vineyard Avenue (south of the Escondido Substation) there are more than 200 sites are listed in the EDR database search within 0.25 miles of the alignment, ranging from sites that use and store small amounts of hazardous materials to sites with known contamination (EDR, 2007a). Because of the large number of sites in this area, including gas stations and light industrial facilities and warehouses with USTs, only sites known contamination in this portion of the FTSE alignment are listed in Table D.10-12 below. It can be assumed that there is a potential to encounter unknown contamination in this entire area due to the large number of hazardous material sites.

Table D.10-12. Identified Hazardous Material Sites within 0.25 Miles of the Central East Substation to Escondido Substation, Northern Route

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
29	Camp Fox	24102 Highway 76, Santa Ysabel	UST	1 active UST, 2000 gallon fuel tank.
33	Barrett Station	27413 Highway 76, Santa Ysabel	UST	Unknown activity, age and number of tanks
3	Richard Walworth	19878 Highway 76, Pauma Valley	HIST UST, SWEEPS UST	One tank, 550 gallon
4	Ken Kellogg	Highway 76 and South Grade Road, Palomar Mountain	HIST UST	2 diesel tanks.

Table D.10-12. Identified Hazardous Material Sites within 0.25 Miles of the Central East Substation to Escondido Substation, Northern Route

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
5	Peter Bull	17348 Highway 76, Pauma Valley	LUST, CORTESE, SD CO. HMMD	Soil only, case closed 1992.
9	Rincon Forest Firs Station	16971 Highway 76, Pauma Valley	HIST UST, SWEEPS UST	Located downgradient
9	Carmichael Farm	17017 Highway 76, Pauma Valley	HIST UST, SWEEPS UST	1 tank. 289 gallon
11	Yuima Municipal Water District	34928 Valley Center Road, Pauma Valley	HIST UST, SWEEPS UST, SD CO. HMMD	1 gasoline tank
11	Family Farm	34815 Valley Center Road, Valley Center	HIST UST, SWEEPS UST, SD CO. HMMD	1 tank, 500 gallon
24	Vista Del Rio	33811 Valley Center Road, Valley Center	HIST UST	1 tank, diesel for smudge pots
36	Joe Young	28575 Sunset Road, Valley Center	HIST UST	2 gasoline tanks
42	Ranch Market	31248 Valley Center Road, Valley Center	HIST UST	2 gasoline tanks, 10,000 gallon each
37	San Diego County Department of Public Works, Valley Center Road Station	28565 Cole Grade Road	LUST, CORTESE, UST, HIST UST, SD CO. SAM	Case closed for diesel leak, 1989. Preliminary Site Assessment work plan filed 1999. 7 USTs on site.
37	Pala Vista Gas Station, Jackson Service	29200 Valley Center Road, Valley Center	LUST, CORTESE, HIST UST	Waste Oil tank leak case closed 1989. Gasoline tank leaks Preliminary Site Assessment work plan filed 1999. 5 tanks. Current status unknown.
37	Pacific Bell	28523 Cole Grade Road, Valley Center	UST, HIST UST	3 diesel tanks.
37	Hummingbirds, Inc.	29219 Juba Road #C, Valley Center	HIST UST	Heliport, 1 tank.
37	John R. Doll	28400 Cole Grade Road, Valley Center	SD CO. SAM, SD CO. HMMD	Soils only 1990. Preliminary Assessment 1994.
38	Valley Center Water District	29300 Valley Center Road, Valley Center	HIST UST	Waste oil, gasoline and diesel tanks.
46	Apro #17, Mobil Service Station, Sanesco Oil Co.	27406 Valley Center Road, Valley Center	LUST, CORTESE, SWEEPS UST, SD CO. SAM, SD CO. HMMD	7 tanks, gasoline and diesel. Leak discovery 1988, status unknown.
52	Oldenburg	2134 East El Norte Parkway, Escondido	SD CO. HMMD	1 diesel UST
66	Express Gasoline, Deans Service & Tire	1140 Mission Ave, Escondido	LUST, HIST UST, SD CO. SAM, SD CO. HMMD	4 to 7 tanks, 1987 case closed. Soil Only Preliminary Site Assessment underway 1999.
78	Pacific Pride Fuel Center, SKS, Inc.	1730 West Washington, Escondido	LUST, SWEEPS UST	Leak discovered 1990, Preliminary assessment 1993, Case closed 2006. 11 USTs.
80	T-Mobile	1441 Montiel Road, Escondido	AST	1 aboveground tank, 2,000 gallon

Table D.10-12. Identified Hazardous Material Sites within 0.25 Miles of the Central East Substation to Escondido Substation, Northern Route

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
80	Bock Co.	1359 Montiel Road, Escondido	SD CO. HMMD, SWEEPS UST	2 tanks, gasoline and diesel.
81	PG&E National Energy Group, NEGT Dispersed Generating Co., LLC	1968 Don Lee Place, Escondido	HAZNET, SD CO. HMMD	1 UST.
81	The Iron Factory	639 Aero Way, Escondido	SD CO. HMMD, FINDS, RCRA SQG	Caustic acid solutions, heavy metal sludge, numerous violations.
81	RW Strang Mechanical, MQ Construction	650 Alpine Way, Escondido	SWEEPS UST, SD CO. HMMD	2 USTs, gasoline and diesel

Source: (EDR, 2007k)

1 EDR Environmental Information Data Site I.D.

2 See Appendix 13 for Detailed Description of Regulatory Agency Listings.

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STATE AND LOCAL DATABASES

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HIST UST: Hazardous Substance Storage Container Database, a historical listing of UST sites.

SWEEPS UST: Statewide Environmental Evaluation and Planning System, listing of USTs from 1980s.

LUST: Leaking Underground Storage Tank Incident Reports, contains an inventory of reported leaking underground storage tank incidents.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

SD Co. SAM: Contains listing of all underground tank release cases and projects actively under review by the Site Assessment and Mitigation Program.

UST: Active UST Facilities, Active UST facilities gathered from the local regulatory agencies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List.

Southern Route. This route would follow the Proposed Project route from Central East Substation to Chicarita Substation where it would diverge from the Proposed Project alignment and continue north to Escondido Substation. From Chicarita Substation the route would run north and northwest along existing 230 kV and 69 kV transmission lines for approximately 7.2 miles, passing near residential areas south of Black Mountain, open space, scattered rural residences, and minor agricultural use. At this point the route would follow the existing 69 kV line east and north along the west shore of Lake Hodges, crossing in and out of low-density rural residential areas of the City of Escondido, for another 7.2 miles and terminate at Escondido Substation, which is located in an industrial area.

Database Search. New EDR database search was obtained and reviewed for the Chicarita Substation to Escondido Substation portion of the 230 kV Southern Route alignment (EDR, 2007k). Based on review of the EDR database search, there are scattered contaminated sites or hazardous material sites within 0.25 miles of the proposed 230 kV segment with potential to impact the project in the industrial area near Escondido Substation and two sites in the Black Mountain commercial areas. These sites are summarized in Table D.10-13. There are numerous known contaminated and hazardous material sites within 0.25 miles of the existing Escondido Substation with potential to impact the project. These sites surround the substation in this industrial area of Escondido where numerous sites are listed in the EDR database, ranging from sites that use and store small amounts of hazardous materials to sites with known contamination (EDR, 2007a). Because of the large number of sites in this area, including gas

stations and light industrial facilities and warehouses with USTs, only sites known contamination are listed in Table D.10-13. It can be assumed that there is a potential to encounter unknown contamination in this entire area due to the large number of hazardous material sites.

Table D.10-13. Identified Hazardous Material Sites within 0.25 Miles of the Central East Substation to Escondido Substation, Southern Route

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
86	B&W Precast Construction, Inc.	2511 Harmony Grove, Escondido	LUST, SD CO. HMMD, SD CO. SAM, SWEEPS UST,	Case closed 1992.
88	San Diego City Metro Wastewater Department, Sewer Pump Station 77B	20101 Lake Drive, Escondido	SD HMMD	1 UST for diesel.
91	San Diego City Water Department, Lake Hodges Reservoir	12111 Lake Drive, Escondido	LUST, SD HMMD	Case closed, 1992. Soil only case closed, 2005.
96	Black Mountain Radio Relay (AT&T)	14577 Black Mountain Road, San Diego	SD HMMD, SWEEPS UST	1 UST, 550 gallon fuel. Site located near top of Black Mountain ~0.5 miles east.

Source: (EDR, 2007k)

1 EDR Environmental Information Data Site I.D.

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STATE AND LOCAL DATABASES

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HIST UST: Hazardous Substance Storage Container Database, a historical listing of UST sites.

SWEEPS UST: Statewide Environmental Evaluation and Planning System, listing of USTs from 1980s.

LUST: Leaking Underground Storage Tank Incident Reports, contains an inventory of reported leaking underground storage tank incidents.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

SD Co. SAM: Contains listing of all underground tank release cases and projects actively under review by the Site Assessment and Mitigation Program.

UST: Active UST Facilities, Active UST facilities gathered from the local regulatory agencies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List.D.10.11.2

Environmental Impacts – 230 kV Future Transmission System Expansion

The future transmission expansion projects, if constructed, would be built by SDG&E because they are located within SDG&E's service territory. While it is likely that SDG&E would implement APMs similar to those that are included in the Sunrise Powerlink application, this cannot be assumed because SDG&E has not submitted an application to construct these projects. As a result, the APMs that were presented for the Proposed Project are converted to and recommended as mitigation measures in this section. This analysis also recommends mitigation measures similar to those that are specified for the Proposed Project.

Construction Impacts

Impact P 1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials, such as vehicle fuels and oils, would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks. This would be a significant impact. Additionally, helicopters may be used to support construction activities in areas where access is limited or where there are environmental constraints to accessing the project area with standard construction vehicles and equipment. All helicopter construction and maintenance activities would be based at a fly yard. Refueling activities for the helicopters could potentially result in soil contamination from improper handling and storage of helicopter fuel at the staging areas or during refueling, a potentially significant impact. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-1c (Personnel trained in proper use and safety procedures for the chemicals used), Mitigation Measure P-1d (Personnel trained in refueling of vehicles), Mitigation Measure P-1e (Preparation of environmental safety plans including spill prevention and response plan), Mitigation Measure P-1f (Applicant's and/or General Contractor environmental/health and safety personnel), and Mitigation Measure P-1g (Proper storage and disposal of generated waste) which would be included as part of the projects in order to reduce the likelihood of spills. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of measures such as Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would be applied to reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

- P-1a** **Implement Environmental Monitoring Program.**
- P-1b** **Maintain emergency spill supplies and equipment.**
- P-1c** **Personnel trained in proper use and safety procedures for the chemicals used.** All personnel involved in using hazardous materials shall be trained in the proper use and safety procedures for the chemical and provided with the necessary Personal Protection Equipment (PPE). A Hazard Communication (HAZCOM) Plan with Material Safety Data Sheets on all hazardous materials used for the project shall be developed. [HS-APM-1]
- P-1d** **Personnel trained in refueling of vehicles.** Only personnel trained in refueling vehicles would be allowed to perform this operation. All refueling operation shall be in designated areas or preformed by assigned vehicles. [HS-APM-2]
- P-1e** **Preparation of environmental safety plans including spill prevention and response plan.** All applicable environmental safety plans associated with hazardous materials shall be developed for the project. These plans include but are not necessarily limited to Hazardous Material Business (HMB) Plan; HAZCOM Plan; Spill Response Plan; 90-day temporary storage and disposal (TSD) facility permit; and SPCC Plan (only if storage is over 1,350 gallons at one location). [HS-APM-3]
- P-1f** **Applicant's and/or General Contractor environmental/health and safety personnel.** The applicant will assign an Environmental Field Representative and/or General Contractor assigned Health & Safety Office to the project. [HS-APM-8]
- P-1g** **Proper storage and disposal of generated waste.** All hazardous waste and solid waste shall be stored and disposed of in accordance with federal, State, and local regulations.

Whenever feasible, hazardous material minimization methods shall be employed and all hazardous materials recycled. [HS-APM-10]

Impact P-2: Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas (Class II)

The potential presence of residual pesticide and herbicide contamination in soil and/or groundwater in the agricultural areas along the Future Expansion alignments represents a significant impact to the health of construction workers and the public. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-2b, Mitigation Measure P-2c, and Mitigation Measure P-2d, which would be implemented with the projects in order to reduce the significance of this impact. This would entail stopping work if suspected contamination is identified, cordoning off the area and taking appropriate health and safety measures, sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits, the appropriate agency (RWQCB or CUPA) shall be notified. However, even with the implementation of these mitigation measures, the impact would be significant as pesticide and herbicide contamination is not always readily apparent by visual or olfactory indicators. Implementation of measures such as Mitigation Measure P-2a (Test for residual pesticides/herbicides) would be required to reduce this impact to less than significant (Class II).

Mitigation Measure for Impact P-2: Residual Pesticides and/or Herbicides could be encountered during grading or excavation in agricultural areas

- P-2a Test for residual pesticides/herbicides in agricultural areas.**
- P-2b Stop work if contamination is detected.** If during excavation if soil or groundwater contamination is suspected (e.g., unusual soil discoloration or strong odor), the contractor or subcontractor shall immediately stop work and notify the General Contractor's assigned Health & Safety Officer and/or the applicant's field environmental representative. [HS-APM-15]
- P-2c Cordon off contaminated areas.** If soil or groundwater contamination is suspected, work near the excavation site shall be terminated, the work area cordoned off, and appropriate health and safety procedures implemented for the location by the General Contractor's assigned Health & Safety Officer and/or the applicant's field environmental representative. Preliminary samples of the soil, groundwater, or material shall be taken by a 40-hour OSHA-trained individual. These samples shall be sent to a California Certified Laboratory for characterization. [HS-APM-16]
- P-2d Notification of regulatory agencies.** If the sample testing determines that contamination is not present, work would be allowed to proceed at the site. However, if contamination is found above regulatory limits, the regulatory agency (e.g., RWQCB or CUPA) responsible for responding to and for providing environmental oversight of the region shall be notified in accordance with State or local regulations. [HS-APM-17]

Impact P-3: Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Ground disturbance along the transmission line routes for the overhead portions would consist primarily of excavation at and near transmission structures and grading of new access roads along and to the alignment. Ground disturbance for the underground portions would be more significant, requiring excavations of trenches for the duct banks and associated vaults, varying from 7 to 12 feet in width and 6 to

11 feet in depth. Although no known existing environmentally contaminated sites are expected along undeveloped portions of the Future Expansion routes, some of the routes pass near identified hazardous material sites (see Table D.10-3) and could pass near future or currently unidentified hazardous material sites, resulting in a potential to encounter unknown contamination during construction. Additionally unknown contamination may be present near developed and rural areas near the ROW and near remote area roads due to illegal dumping, a potentially significant impact.

Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-2b, Mitigation Measure P-2c, and Mitigation Measure P-2d which would be implemented as a part of the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified by visual staining or odor, cordoning off suspected areas of contamination and taking appropriate health and safety measures, sampling and testing of suspected material conducted, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials. This would be a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting to CPUC and BLM the locations of sampling results and actions taken for potentially contaminated sites. Therefore, Mitigation Measures P-3a and P-3b would also need to be implemented. These would ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

- P-2b Stop work if contamination is detected. [HS-APM-15]**
- P-2c Cordon off contaminated areas. [HS-APM-16]**
- P-2d Notification of regulatory agencies. [HS-APM-17]**
- P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.**
- P-3b Documentation of compliance with measures for encountering unknown contamination.**

Impacts P-4: Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers or the public during construction (Class II)

A portion of the ROW in the Inland Valley Link (between approximately MP 134.15 and the existing Sycamore Canyon Substation) and a portion of the Central East to Escondido Transmission Expansion alignment are located within the boundaries of the Marine Corps Air Station (MCAS) Miramar. Historically areas of Miramar have been used for bombing and munitions testing, resulting in a potential of encountering UXO during project excavations. This could result in death or injury to workers. This also would be a significant impact. The Imperial Valley Link route is adjacent to Department of Defense land that has been used for bombing and weapons training for many decades. A Future Expansion route passes adjacent to and through (see Table D.10-1) areas that were used for bombing and weapons training in the mid-1940s. These areas have known UXO scattered throughout. Excavation for tower foundations or grading for access roads could encounter UXO, resulting in death or injury. In

order to reduce potential health hazards related to exposure to UXO, prior to the start of construction, SDG&E would perform a survey of identified FUDS database sites as well as other areas along the project transmission line ROW with historical military activities. The survey would include identification of potential UXO locations, from which a determination of what may be present shall be made. After the survey is completed, the appropriate contractor shall arrange for extensive survey of identified location(s) and the removal of any UXO, if found (SDG&E, 2006). Impacts associated with unexploded ordnance would be significant, but implementation of Mitigation Measures P-4a and P-4b would reduce the impacts to be less than significant. Under Mitigation Measure P-4a, trained experts shall be used to investigate and remove unexploded ordnance in known and potential military areas prior to the start of construction. Mitigation Measure P-4b would require the UXO contractor to provide training to the construction contractor's personnel involved in grading and excavation regarding the identification of UXO prior to start of work. Identification and removal of UXO prior to construction and training to recognize UXO would ensure that the impact would be less than significant (Class II).

Mitigation Measure for Impact P-4: Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers or the public during construction

- P-4a Unexploded ordnance to be removed by trained personnel.** An Unexploded Ordnance (UXO) investigation of known and potential areas used by the military along the ROW shall be undertaken by a trained contractor. If UXO are found, they shall be removed by trained personnel. [HS-APM-6]
- P-4b Train project personnel to recognize unexploded ordnance.** All personnel involved in excavation and grading or for ROW clearing shall be trained to recognized UXO and/or potential soil, surface water, and groundwater potential contamination sites. [HS-APM-7]

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II)

Several LUST sites are listed along the Coastal Link alignment, primarily near the proposed underground segment. Most of the sites are listed as "case closed" with the exception of Shell Service Station #12/Exxon #1039 at 12929 Rancho Peñasquitos Drive in San Diego, which is listed as undergoing pollution characterization (EDR, 2006a). The presence of this known contaminated site near the alignment results in a potential for contaminated soil and/or groundwater to have migrated to the project ROW and thus be encountered during construction, a significant impact. Additionally, routes that traverse commercial or industrial areas have an increased risk for future environmental contamination.

All future 230 kV transmission lines that are part of the Future Expansion would require new applications by SDG&E, followed by preparation of project-level environmental documents and separate approvals from the CPUC prior to permitting and construction. During the environmental review process for the Future Expansion transmission lines, mitigation measures would be identified to address the construction impacts listed above. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented to reduce impacts from known contaminated soil and groundwater, including: Mitigation Measure P-1g and Mitigation Measure P-7b. Mitigation Measure P-1g requires that all hazardous waste be stored and disposed of in accordance with federal, State, and local requirements. Mitigation Measure P-7b requires that SDG&E investigate all government code §65962.5 sites that along the project ROW that could potentially impact the project. Government code §65962.5 (commonly referred to as the Cortese List) includes DTSC listed hazardous waste facilities and sites, DHS lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks and which have had a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.

Nevertheless, environmental impacts would still be significant if contaminated sites near the future project ROWs were not adequately characterized and contamination from these areas had migrated to the soil or groundwater within the project ROWs. In order to reduce potential health hazards related to exposure of construction personnel and/or the public to hazardous materials in the soil, groundwater, or surface water to less than significant, SDG&E would implement Mitigation Measure P-7a (Evaluate contaminated sites). This four step mitigation measure will reduce environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-1g Proper storage and disposal of generated waste. [HS-APM-10]

P-7a Evaluate contaminated sites.

P-7b Investigate contaminated sites. All Government Code §65962.5 sites or other known contamination sites along the transmission line ROW or such sites that would affect construction work shall be investigated to determine potential impacts to the project. [HS-APM-5]

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class II)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials along the transmission alignment during maintenance operations. This could potentially result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-1c (Personnel trained in proper use and safety procedures for the chemicals used), Mitigation Measure P-1e (Preparation of environmental safety plans including spill prevention and response plan), and Mitigation Measure P-1g (Proper storage and disposal of generated waste). These measures would reduce the likelihood of spills and would reduce any significant impacts of spills, but they would not completely prevent spills from occurring. However, in the event a spill were to occur, these mitigation measures would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers, a less than significant impact (Class II)

Mitigation Measure for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

P-1c Personnel trained in proper use and safety procedures for the chemicals used. [HS-APM-1]

P-1e Preparation of environmental safety plans including spill prevention and response plan. [HS-APM-3]

P-1g Proper storage and disposal of generated waste. [HS-APM-10]

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil, to prevent emergence of new growth, and to emergent plant material. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns, which is summarized Table D-10-8. The herbicides used by SDG&E and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and recommendations for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, considering the generally low toxicity of these herbicides, their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is a less than significant impact (Class III).

D.10.11.2 Environmental Setting – 500 kV Future Transmission System Expansion

As described in Section B.7.2 and illustrated in Figure B-12b, the potential Future 500 kV Circuit would connect the proposed Central East Substation to the Southern California Edison (SCE) transmission system at a new substation north of Interstate 15 (I-15), about 20 miles west of SCE's Valley Substation.

Based on information provided by SDG&E, a potential 500 kV line would exit the proposed Central East Substation, running west to Valley Center, north to Rainbow, again west to Camp Pendleton, and finally north through the Cleveland National Forest to connect with SCE's existing Serrano-Valley 500 kV line in Riverside County (SDG&E, 2007b).

The potential future 500 kV circuit would exit the proposed Central East Substation, running northwest across open space and grazing land paralleling the existing 69 kV line past the Warners Substation. It would then follow the existing Warners-Rincon 69 kV transmission line across open space grazing land past Lake Henshaw near the lake's northern shore until it would meet SR76. The route would continue to follow the existing 69 kV line and generally following SR76 for approximately 12 miles through open space with scattered rural residences and citrus groves to Rincon Substation. From Rincon, the route would continue west along the existing Rincon-Lilac 69 kV transmission line through agricultural areas and citrus groves for approximately 9.5 miles across Valley Center and meet the existing Talega-Escondido 230 kV transmission line west of Lilac Substation. The route would parallel the existing 230 kV line north for approximately 13 miles through scattered residential properties and open space, turning west with the existing corridor near the community of Rainbow. As the alignment continues west it crosses scattered rural residential properties and agricultural land (primarily orchards or groves) of the Fallbrook area. Continuing west it approaches and crosses the rural community of De Luz, which

consists primarily of scattered rural residential properties and small ranches with agricultural fields and groves. After traveling for approximately 16 miles west, the potential future 500 kV route would be between the northern boundary of Camp Pendleton Marine Corps Base and Cleveland National Forest.

From Camp Pendleton, the alignment would then turn north and parallel the proposed LEAPS 500 kV “staff alternative” alignment, to connect to SCE’s existing Serrano-Valley 500 kV transmission line at a new substation north of Interstate 15 (I-15), about 20 miles west of SCE’s Valley Substation. The new 500 kV transmission line route for this project would pass through a mixture of rural residential areas and undeveloped forest land with trees and scrub brush.

Database Search. New environmental databases (EDR, 2007k and 2007j) were obtained and reviewed for the proposed future 500 kV circuit from Central East Substation to the new substation north of Interstate 15 (I-15), about 20 miles west of SCE’s Valley Substation. Based on review of the EDR database search, there are 16 contaminated sites or hazardous material sites within 0.25 miles of the proposed future 500 kV circuit with potential to impact the project. These sites are summarized in Table D.10-14.

Table D.10-14. Identified Hazardous Material Sites within 0.25 Miles of the Central East Substation to West of Lilac Substation 500 kV Transmission Line

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
29	Camp Fox	24102 Highway 76, Santa Ysabel	UST	1 active UST, 2000 gallon fuel tank.
33	Barrett Station	27413 Highway 76, Santa Ysabel	UST	Unknown activity, age and number of tanks
3	Richard Walworth	19878 Highway 76, Pauma Valley	HIST UST, SWEEPS UST	One tank, 550 gallon
4	Ken Kellogg	Highway 76 and South Grade Road, Palomar Mountain	HIST UST	2 diesel tanks, 1,000 and 2,000 gallon.
5	Peter Bull	17348 Highway 76, Pauma Valley	LUST, CORTESE, SD CO. HMMD	Minor leak, soil only, case closed 1992.
9	Rincon Forest Firs Station	16971 Highway 76, Pauma Valley	HIST UST, SWEEPS UST	1 tank, 550 gallon gasoline.
9	Carmichael Farm	17017 Highway 76, Pauma Valley	HIST UST, SWEEPS UST	1 tank. 289 gallon.
11	Yuima Municipal Water District	34928 Valley Center Road, Pauma Valley	HIST UST, SWEEPS UST, SD CO. HMMD	1 gasoline tank.
12	Keith Tantlinger	14268 Tyler Road, Valley Center	HIST UST	2 tanks, diesel and gasoline.
14	Pacific Ranch	31365 Cole Grade Road, Valley Center	HIST UST	2 tanks, diesel.
14	Valley Center High School	31322 Cole Grade Road, Valley Center	HAZNET, LUST, SD CO. HMMD, SD CO. SAM	Waste oil, soil only, Preliminary Site Assessment underway 2004.
20	Darrel Genzone Ranch	30745 Mesa Crest Road, Valley Center	HIST UST	1 tank, 550 gallon gasoline. Located downgradient of project.
30	John H. Ebersole, Jr.	30459 Rolling Hills Road, Valley Center	HIST UST	5 tanks, gasoline

Table D.10-14. Identified Hazardous Material Sites within 0.25 Miles of the Central East Substation to West of Lilac Substation 500 kV Transmission Line

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
32	Stuck Flower Ranch, Inc.	11252 Rolling Hills Way, Valley Center	SD CO. HMMMD, SD CO. SAM, HIST UST, SWEEEPS UST	1 tank, 500 gallon, soil only, case closed 1996.
2*	SDG&E Rainbow Gas Compressor Station	3051 Rainbow Valley Blvd, Fallbrook	FINDS, AST, RCRA_LQG, HAZNET, LUST, SD CO. HMMMD	Site disposes of miscellaneous organic and inorganic solid and liquid waste and stores and uses miscellaneous chemicals on site. LUST was lubrication oil and is now case closed.
5*	Rainbow Conservation Camp	8215 Rainbow Heights Road, Fallbrook	HIST UST, SWEEEPS UST, SD Co. HMMMD	Two USTs listed, one gasoline and one diesel. Disposes of miscellaneous solid and liquid wastes.

1 EDR Environmental Information Data Site I.D., 2007k and 2007j. Sites with * from the 2007j database.

2 FEDERAL RECORDS

RCRA-LQG: Resource Conservation and Recovery Act Information. Large Quantity Generator

FINDS: Facility Index System/Facility Registry System, contains both facility information and 'pointers' to other sources that contain more detail.

STATE AND LOCAL DATABASES

UST: Active UST Facilities, Active UST facilities gathered from the local regulatory agencies

HIST UST: Hazardous Substance Storage Container Database, a historical listing of UST sites.

SWEEPS UST: Statewide Environmental Evaluation and Planning System, listing of USTs from 1980s.

LUST: Leaking Underground Storage Tank Incident Reports, contains an inventory of reported leaking underground storage tank incidents.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMMD: San Diego County Hazardous Materials Management Division Database

SD Co. SAM: Contains listing of all underground tank release cases and projects actively under review by the Site Assessment and Mitigation Program.

UST: Active UST Facilities, Active UST facilities gathered from the local regulatory agencies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List.

D.10.11.3 Environmental Impacts – 500 kV Future Transmission System Expansion

The 500 kV future transmission expansion project, if constructed, would be built by SDG&E because they would be located within SDG&E's service territory. While it is likely that SDG&E would implement APMs similar to those that are included in the Sunrise Powerlink application, this cannot be assumed because SDG&E has not submitted an application to construct these projects. As a result, the APMs that were presented for the Proposed Project are converted to and recommended as mitigation measures in this section. This analysis also recommends mitigation measures similar to those that are recommended for the Proposed Project. **Construction Impacts.**

Impact P 1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks, a significant impact. Additionally, helicopters may be used to support construction activities in areas where access is limited or where there are environmental constraints to accessing the project area with standard construction vehicles and equipment. All helicopter construction and maintenance activities would be based at a fly yard. Refueling activities for the helicopters could potentially result in soil contamination from improper handling and storage of helicopter fuel at the staging areas or during refueling, a potentially

significant impact. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-1c (Personnel trained in proper use and safety procedures for the chemicals used), Mitigation Measure P-1d (Personnel trained in refueling of vehicles), Mitigation Measure P-1e (Preparation of environmental safety plans including spill prevention and response plan), Mitigation Measure P-1f (Applicant's and/or General Contractor environmental/health and safety personnel), and Mitigation Measure P-1g (Proper storage and disposal of generated waste) which would be included as part of the projects in order to reduce the likelihood of spills. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of measures such as Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would be applied to reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

- P-1a** **Implement Environmental Monitoring Program.**
- P-1b** **Maintain emergency spill supplies and equipment.**
- P-1c** **Personnel trained in proper use and safety procedures for the chemicals used. [HS-APM-1]**
- P-1d** **Personnel trained in refueling of vehicles. [HS-APM-2]**
- P-1e** **Preparation of environmental safety plans including spill prevention and response plan. [HS-APM-3]**
- P-1f** **Applicant's and/or General Contractor environmental/health and safety personnel. [HS-APM-8]**
- P-1g** **Proper storage and disposal of generated waste. [HS-APM-10]**

Impact P-2: Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas (Class II)

The potential presence of residual pesticide and herbicide contamination of the soil and/or groundwater in the agricultural areas along the Future Expansion 500 kV alignment represents a significant impact due to the health hazards to construction workers and the public stemming from exposure to pesticide or herbicide contaminated soil and/or groundwater. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-2b, Mitigation Measure P-2c, and Mitigation Measure P-2d, which would be implemented with the projects in order to reduce the significance of this impact by stopping work if suspected contamination is identified, cordoning off the area and taking appropriate health and safety measures, sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, even with the implementation of these mitigation measures, the impact would be significant as pesticide and herbicide contamination is not always readily apparent by visual or olfactory indicators. Implementation of measures such as Mitigation Measure P-2a (Test for residual pesticides/herbicides) would be required to reduce this impact to less than significant (Class II).

Mitigation Measure for Impact P-2: Residual Pesticides and/or Herbicides could be encountered during grading or excavation in agricultural areas

- P-2a** **Test for residual pesticides/herbicides in agricultural areas.**

- P-2b Stop work if contamination is detected. [HS-APM-15]**
- P-2c Cordon off contaminated areas. [HS-APM-16]**
- P-2d Notification of regulatory agencies. [HS-APM-17]**

Impact P-3: Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Ground disturbance along the transmission line route would consist primarily of excavation at and near transmission structures and grading of new access roads along and to the alignment. Although no known existing environmentally contaminated sites are expected along undeveloped portions of the 500 kV Future Expansion route, portions of the route passes near identified hazardous material sites (see Table D.10-14) and could pass near future or currently unidentified hazardous material sites, resulting in a potential to encounter unknown contamination during construction. Additionally unknown contamination may be present near developed and rural areas near the ROW and near remote area roads due to illegal dumping, a potentially significant impact.

Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-2b, Mitigation Measure P-2c, and Mitigation Measure P-2d which would be implemented as a part of the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified by visual staining or odor, cordoning off suspected areas of contamination and taking appropriate health and safety measures, sampling and testing of suspected material conducted, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM. Therefore Mitigation Measures P-3a and P-3b would also need to be implemented to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

- P-2b Stop work if contamination is detected. [HS-APM-15]**
- P-2c Cordon off contaminated areas. [HS-APM-16]**
- P-2d Notification of regulatory agencies. [HS-APM-17]**
- P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.**
- P-3b Documentation of compliance with measures for encountering unknown contamination.**

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II)

Several LUST sites are listed along the future 500 kV alignment, with most of the sites are listed as "case closed" with the exception of Valley Center High School at 31322 Cole Grade Road, Valley Center,

which is listed as undergoing pollution characterization (EDR, 2007k). The presence of this known contaminated site near the alignment results in a potential for contaminated soil and/or groundwater to have migrated to the project ROW and thus be encountered during construction, a significant impact.

The future 500 kV transmission line that is part of the Future Expansion would require a new application by SDG&E, followed by preparation of project-level environmental documents and separate approvals from the CPUC prior to permitting and construction. During the environmental review process for the 500 kV Future Expansion transmission line, mitigation measures would be identified to address the construction impacts listed above. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented to reduce impacts from known contaminated soil and groundwater, including: Mitigation Measure P-1g and Mitigation Measure P-7b. Mitigation Measure P-1g requires that all hazardous waste be stored and disposed of in accordance with federal, State, and local requirements. Mitigation Measure P-7b requires that SDG&E investigate all government code §65962.5 sites that along the project ROW that could potentially impact the project. Nevertheless, environmental impacts would still be significant if contaminated sites near the future project ROWs were not adequately characterized and contamination from these areas had migrated to the soil or groundwater within the project ROWs. In order to reduce potential health hazards related to exposure of construction personnel and/or the public to hazardous materials in the soil, groundwater, or surface water to less than significant, SDG&E would implement Mitigation Measure P-7a (Evaluate contaminated sites). This mitigation measure will reduce environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

- P-1g** **Proper storage and disposal of generated waste.** [HS-APM-10]
- P-7a** **Evaluate contaminated sites.**
- P-7b** **Investigate contaminated sites.** [HS-APM-5]

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class II)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials along the future 500 kV transmission line during maintenance operations. This could potentially result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-1c (Personnel trained in proper use and safety procedures for the chemicals used), Mitigation Measure P-1e (Preparation of environmental safety plans including spill prevention and response plan), and Mitigation Measure P-1g (Proper storage and disposal of generated waste). These measures would reduce the likelihood of spills and would reduce any significant impacts of spills, but they would not completely prevent spills from occurring. However, in the event a spill were to occur, these mitigation measures would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers, a less than significant impact (Class II).

Mitigation Measures for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

- P-1c Personnel trained in proper use and safety procedures for the chemicals used.** [HS-APM-1]
- P-1e Preparation of environmental safety plans including spill prevention and response plan.** [HS-APM-3]
- P-1g Proper storage and disposal of generated waste.** [HS-APM-10]

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns, which is summarized in Table D-10-8. The herbicides used by SDG&E and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and recommendations for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, considering the generally low toxicity of these herbicides, their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is a less than significant impact (Class III).

D.10.12 Connected Actions and Indirect Effects

Section B.6 describes the other projects that have been found to be related to the Sunrise Powerlink Project. They fall into two categories:

- **Connected Actions.** The four projects found to be connected to the Sunrise Powerlink Project are the Stirling Energy Systems solar facility, two components of the IID 230 kV transmission system upgrades, the Esmeralda-San Felipe Geothermal Project, and the Jacumba Substation. Those projects are addressed in Sections D.10.12.1 through D.10.12.4.
- **Indirect Effects.** One project, the SCE La Rumorosa Wind Project, would create effects as a result of the construction and operation of the Sunrise Powerlink Project. That project is addressed in Section D.10.12.5.

D.10.12.1 Stirling Energy Systems Solar Two LLC Project – Environmental Contamination

As agreed in a Power Purchase Agreement (PPA) approved by the CPUC, SDG&E would purchase up to 900 MW of solar power produced at a proposed 8,000-acre Concentrating Solar Power (CSP) facility in the Imperial Valley (see Section B.6.1). At least 600 MW of this total would be transmitted via the SRPL. Stirling Energy Systems (SES) Solar Two, LLC would construct, own and operate the CSP facility and an associated 230 kV transmission line. The CSP site would be leased by SES from BLM, and additional individual private parcels within the site boundaries would be acquired. The transmission line would be constructed within a new ROW easement just north of and adjacent to the SWPL.

As described in Section B.6, the CPUC and BLM have determined that the Stirling CSP facility and associated 230 kV transmission line are so closely related to the Proposed Project as to be considered “connected actions” under the NEPA. Therefore, the Stirling site and transmission line are discussed in this EIR/EIS in order to fully disclose the potential for this project to be constructed as a result of the presence of the SRPL (if it is approved and constructed). Mitigation that would reduce significant impacts of the Stirling CSP facility and transmission line have been included in the environmental impact analysis below.

Approval of the SRPL would not result in automatic approval of the Stirling CSP facility or transmission line discussed below, and the project would require SES permit applications to CEC and BLM and compliance with CEQA and NEPA, followed by approvals from the CEC and BLM prior to construction on BLM lands.

Environmental Setting

The SES site and transmission line route would traverse primarily undeveloped desert open space on BLM lands. The line would parallel the north side of the SWPL #1 500 kV line for its entire 9-mile length passing across primarily flat to gently sloping terrain dissected by ephemeral streams and washes and dotted with sparse scrub vegetation. The route would not pass through any current agricultural land. However, it would pass approximately 0.25 miles southwest of irrigated agriculture (MP GT 2.8). The SES transmission route would terminate just south of the U.S. Gypsum sheetrock manufacturing plant in Plaster City, which is along the northern boundary of the SES site.

Database Search. An EDR database search (EDR, 2006a) provided by the applicant for a one-mile-wide corridor (one-half mile on both sides), which includes the first 21 miles of the SWPL corridor was reviewed. No sites with known environmental contamination or that store, use, and dispose of significant quantities of hazardous materials were identified along the SES route or at the SES site. This database search covers the entire SES transmission line route and most of the SES solar site. Based on the undeveloped nature of the area and a review of the RWQCB GeoTracker website (RWQCB, 2007), no environmentally contaminated sites are expected to occur within the entire solar dish area.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impact P-2 (Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas) would not occur, because there is no agricultural land within the SES transmission line corridor or the SES site. Impact P-4 (UXO encountered during construction could explode and

injure workers or the public) would also not occur because the site and transmission route do not pass through or adjacent to military land. No known contaminated sites exist along or within the SES transmission line corridor or the SES site, therefore Impact P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur. These impacts are therefore are not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

During construction operations, hazardous materials such as vehicle fuels, oils, and other vehicle maintenance fluids would be used and stored in construction staging yards. A list of hazardous materials typically used for transmission line construction that are expected to be used during project construction is presented in Table D.10-7. Installation of the solar dishes would likely use similar hazardous materials. Gasoline, diesel fuel, oil, hydraulic fluid, lubricants paints, solvents, adhesives, and cleaning chemicals used in construction activities, equipment, and vehicles can be released during construction. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, such as Mitigation Measure P-1c (Personnel trained in proper use and safety procedures for the chemicals used), Mitigation Measure P-1d (Personnel trained in refueling of vehicles), Mitigation Measure P-1e (Preparation of environmental safety plans including spill prevention and response plan), Mitigation Measure P-1f (Applicant's and/or General Contractor environmental/health and safety personnel), and Mitigation Measure P-1g (Proper storage and disposal of generated waste) could be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Additionally, Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) could be applied to reduce the significant environmental impacts of hazardous material spills should they still occur to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

- P-1a Implement Environmental Monitoring Program.**
- P-1b Maintain emergency spill supplies and equipment.**
- P-1c Personnel trained in proper use and safety procedures for the chemicals used. [HS-APM-1]**
- P-1d Personnel trained in refueling of vehicles. [HS-APM-2]**
- P-1e Preparation of environmental safety plans including spill prevention and response plan. [HS-APM-3]**
- P-1f Applicant's and/or General Contractor environmental/health and safety personnel. [HS-APM-8]**
- P-1g Proper storage and disposal of generated waste. [HS-APM-10]**

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Review of the EDR database survey (EDR, 2006a) and the GeoTracker website (RWQCB, 2007) indicates that there are no environmentally contaminated sites along the 230 kV ROW or at the solar site. Although unanticipated contamination along the project ROW is unlikely due to the undeveloped

nature of the surrounding areas, there is a potential for unknown contamination to have occurred along and near area roads due to illegal dumping. Mitigation Measures similar to SDG&E's APMs for the Proposed Project such as Mitigation Measure P-2b, Mitigation Measure P-2c, and Mitigation Measure P-2d could be implemented as a part of the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified by visual staining or odor, cordoning off suspected areas of contamination and taking appropriate health and safety measures, sampling and testing of suspected material conducted, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM. Therefore, Mitigation Measures P-3a and P-3b would also need to be implemented to ensure that laboratory data are properly interpreted by trained personnel with regard to contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

- P-2b** **Stop work if contamination is detected.** [HS-APM-15]
- P-2c** **Cordon off contaminated areas.** [HS-APM-16]
- P-2d** **Notification of regulatory agencies.** [HS-APM-17]
- P-3a** **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**
- P-3b** **Documentation of compliance with measures for encountering unknown contamination.**

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class II)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during facility operations or during maintenance of the transmission line, towers, and other associated transmission components. This could result in exposure of the facility, maintenance workers, and the public to hazardous materials; and could result in contamination to soil and/or groundwater. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-1c (Personnel trained in proper use and safety procedures for the chemicals used), Mitigation Measure P-1e (Preparation of environmental safety plans including spill prevention and response plan), and Mitigation Measure P-1g (Proper storage and disposal of generated waste). These measures would reduce the likelihood of spills and would reduce any significant impacts of spills, but they would not completely prevent spills from occurring (Class II). However, in the event a spill were to occur, these mitigation measures would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly

cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers, a less than significant impact (Class II).

Mitigation Measures for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

- P-1c Personnel trained in proper use and safety procedures for the chemicals used.** [HS-APM-1]
- P-1e Preparation of environmental safety plans including spill prevention and response plan.** [HS-APM-3]
- P-1g Proper storage and disposal of generated waste.** [HS-APM-10]

D.10.12.2 IID Transmission System Upgrades – Environmental Contamination

As part of Phase 2 of the Imperial Valley Study Group’s development plan (see Section A.4.3), IID would construct a new 230 kV line from the Bannister Substation to a new San Felipe 500/230 kV Substation to interconnect to the proposed Imperial Valley to San Diego 500 kV line (i.e., the Sunrise Powerlink line). This San Felipe Substation could potentially provide an additional interconnection between the IID and CAISO systems, and thus another point for the delivery of renewable resources to southern California loads. IID would construct, own and operate these upgrades.

As described in Section B.6, the CPUC and BLM have determined that these IID Transmission System Upgrades are so closely related to the Proposed Project as to be considered “connected actions” under the National Environmental Policy Act (NEPA). Therefore, IID Transmission System Upgrades are discussed in this EIR/EIS in order to fully disclose the potential for a Bannister–San Felipe 230 kV transmission line and new San Felipe 500/230 kV Substation to be constructed as a result of the presence of the SRPL (if it is approved and constructed). Types of mitigation that would likely reduce potentially significant impacts of the IID Transmission System Upgrades projects have been included in the environmental impact analysis below. However, implementation of specific mitigation measures would be developed and executed by IID at the time of project permitting and approval.

Approval of the SRPL would not result in automatic approval of the IID Transmission System Upgrades discussed below, and the projects would require applications by IID, compliance with CEQA and NEPA, followed by approvals from the BLM prior to construction on BLM lands.

Environmental Setting

San Felipe 500/230 kV Substation. The substation site would be located on flat, undeveloped open desert land east of the existing San Felipe Substation.

IID Bannister–San Felipe 230 kV Transmission Line. The 230 kV transmission corridor would pass through undeveloped open desert land consisting primarily of flat to gently sloping terrain with sparse scrub vegetation and dissected by numerous small washes and local arroyos (ephemeral stream channels). Additionally, from approximately MP IID 0 to MP IID 6.8 the route would pass just outside of and generally parallel to Navy/military land, which has been and is currently used for bombing and other munitions testing. Generally the alignment parallels existing roads and would be adjacent to the proposed SRPL, if constructed.

One formerly used military site was identified on the USACE FUDS list for Imperial County, the Kane Springs SBT (#62) site. The IID Bannister–San Felipe 230 kV transmission route would cross the

northeastern corner of this site at approximately MP IID-3. This site was used between 1944 and 1946 by the Navy as a miniature bomb and strafing practice area and related bombing and strafing ordnance have been noted on the site (USACE, 2006). No known or potentially contaminated sites were identified in the EDR database (EDR, 2006a) along the transmission alignment or at the substation site.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impact P-2 (Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas) would not occur, because there is no agricultural land within the 230 kV corridor or at the San Felipe Substation site.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

During construction operations, hazardous materials such as vehicle fuels, oils, and other vehicle maintenance fluids would be used and stored in construction staging yards. A list of hazardous materials typically used for transmission line and substation construction that are expected to be used during project construction is presented in Table D.10-7 (Hazardous Materials Typically Used for Transmission Line Construction). Gasoline, diesel fuel, oil, hydraulic fluid, lubricants paints, solvents, adhesives, and cleaning chemicals used in construction activities, equipment, and vehicles can be released during construction. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. Mitigation Measures similar to SDG&E's APMs such as Mitigation Measure P-1c (Personnel trained in proper use and safety procedures for the chemicals used), Mitigation Measure P-1d (Personnel trained in refueling of vehicles), Mitigation Measure P-1e (Preparation of environmental safety plans including spill prevention and response plan), Mitigation Measure P-1f (Applicant's and/or General Contractor environmental/health and safety personnel), and Mitigation Measure P-1g (Proper storage and disposal of generated waste) could be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Additionally, Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) could be applied to reduce the significant environmental impacts of hazardous material spills should they still occur to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

- P-1a** **Implement Environmental Monitoring Program.**
- P-1b** **Maintain emergency spill supplies and equipment.**
- P-1c** **Personnel trained in proper use and safety procedures for the chemicals used. [HS-APM-1]**
- P-1d** **Personnel trained in refueling of vehicles. [HS-APM-2]**
- P-1e** **Preparation of environmental safety plans including spill prevention and response plan. [HS-APM-3]**
- P-1f** **Applicant's and/or General Contractor environmental/health and safety personnel. [HS-APM-8]**
- P-1g** **Proper storage and disposal of generated waste. [HS-APM-10]**

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Review of the EDR database survey (EDR, 2006a) indicates that, other than one formerly used military site (FUDS), there are no other environmentally contaminated sites along the 230 kV ROW or at the substation site. Where ROW is adjacent to or crosses military land, including the Kane Springs SBT (#62) FUDS site, unanticipated soil contamination could exist. Possible types of contamination include gasoline and diesel fuel residuals, heavy metals, and/or other hazardous materials disposed of by the military. Although unanticipated contamination along the non-military portions of the project ROW is unlikely due to the undeveloped nature of the surrounding areas, there is a potential for unknown contamination to have occurred along and near area roads due to illegal dumping. Mitigation Measures similar to SDG&E's APMs for the Proposed Project such as Mitigation Measure P-2b, Mitigation Measure P-2c, and Mitigation Measure P-2d could be implemented as a part of the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified by visual staining or odor, cordoning off suspected areas of contamination and taking appropriate health and safety measures, sampling and testing of suspected material conducted, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM. Therefore, Mitigation Measures P-3a and P-3b would also need to be implemented to ensure that laboratory data are properly interpreted by trained personnel with regard to contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

- P-2b Stop work if contamination is detected. [HS-APM-15]**
- P-2c Cordon off contaminated areas. [HS-APM-16]**
- P-2d Notification of regulatory agencies. [HS-APM-17]**
- P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.**
- P-3b Documentation of compliance with measures for encountering unknown contamination.**

Impact P-4: Unexploded ordnance encountered during construction could explode and injure workers or the public (Class II)

The 230 kV route crosses adjacent to Department of Defense land that has been used for bombing and weapons training for many decades. As described in the Environmental Setting, the route would pass adjacent to and through areas that were used for historic bombing and weapons training in the mid-1940s and have known unexploded ordnance scattered throughout the sites. Excavation for tower foundations or grading for access roads could encounter unexploded ordnance, resulting in death or injury to workers or the public. In order to reduce potential health hazards related to exposure to UXO, the Applicant could implement measures similar to SDG&E's for the Proposed Project. These measures would include a survey of identified FUDS database sites as well as other areas along the project trans-

mission line ROW with historical military activities prior to the start of construction. The survey should include identification of potential UXO locations, from which a determination of what possibly would be present shall be made. After the survey is completed, the appropriate contractor shall arrange for extensive survey of identified location(s) and the removal of any UXO, if found. Impacts associated with unexploded ordnance would be significant, but implementation of Mitigation Measures P-4a and P-4b would reduce the impacts to be less than significant. Under Mitigation Measure P-4a, trained experts shall be used to investigate and remove unexploded ordnance in known and potential military areas prior to the start of construction. Mitigation Measure P-4b would require the UXO contractor to provide training to the construction contractor's personnel involved in grading and excavation-related to the identification of UXO prior to start of work. Identification and removal of UXO prior to construction and training to recognize UXO would ensure that the impact would be less than significant (Class II).

Mitigation Measure for Impact P-4: Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers or the public during construction

P-4a Unexploded ordnance to be removed by trained personnel. [HS-APM-6]

P-4b Train project personnel to recognize unexploded ordnance. [HS-APM-7]

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class II)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials at the substations during facility operations or during maintenance of the transmission line, towers, and other associated transmission components. This could result in exposure of the facility, maintenance workers, and the public to hazardous materials; and could result in contamination to soil and/or groundwater. Mineral oil would be used in the new transformers, switches, circuit breakers, capacitors, and other new electrical equipment. Mineral oil is considered a hazardous material under federal regulations (CWA Section 311), and mineral oil storage or use in aboveground storage containers in levels exceeding 660 gallons in a single oil storage tank or greater than 1,320 gallons in one or multiple containers at a site is regulated under Title 40 CFR 112--"the SPCC rule" which is part of the federal CWA. The new San Felipe Substation will require new Hazardous Material Business Plans, including a Hazardous Communication Plan, Spill Response Plan, Temporary Storage and Disposal facility permit, and SPCC plan for the facility.

Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-1c (Personnel trained in proper use and safety procedures for the chemicals used), Mitigation Measure P-1e (Preparation of environmental safety plans including spill prevention and response plan), and Mitigation Measure P-1g (Proper storage and disposal of generated waste). These measures would reduce the likelihood of spills and would reduce any significant impacts of spills, but they would not completely prevent spills from occurring. However, in the event a spill were to occur, these mitigation measures would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers, a less than significant impact (Class II)

Mitigation Measure for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

- P-1c Personnel trained in proper use and safety procedures for the chemicals used.** [HS-APM-1]
- P-1e Preparation of environmental safety plans including spill prevention and response plan.** [HS-APM-3]
- P-1g Proper storage and disposal of generated waste.** [HS-APM-10]

D.10.12.3 Esmeralda–San Felipe Geothermal Project – Environmental Contamination

An EIS is currently being prepared by BLM to analyze the leasing of geothermal resources exploration, development, and utilization in the Truckhaven Geothermal Leasing Area (Truckhaven) located in western Imperial County, California (refer to Figure B-46). Currently, BLM has non-competitive geothermal lease applications pending for portions of this land, including lease applications from Esmeralda Energy, LLC (Esmeralda); however, the land must first be assessed under NEPA regulations before granting leases. Under the Proposed Action analyzed in the EIS, BLM would approve the pending non-competitive leases and offer competitive leases for all other available lands at Truckhaven.

The Esmeralda–San Felipe Geothermal Project would develop 20 MW of geothermal resources within the Truckhaven Geothermal Leasing Area; however, Esmeralda is not able to submit a project application to BLM for the Esmeralda–San Felipe Geothermal Project until their pending lease applications with BLM for Truckhaven are approved. In the absence of a formal Project application, it is assumed that roughly half of the components identified under the Reasonably Foreseeable Development (RFD) scenario in BLM’s Truckhaven EIS would apply to the Esmeralda–San Felipe Geothermal Project. Additionally, the description of the environmental setting and likely impacts are partially adapted from the Draft EIS/EIR for the Truckhaven Geothermal Leasing Area (February 2007). The RFD describes the anticipated development that would occur at Truckhaven to facilitate geothermal resources exploration, development and utilization should the leases be approved by BLM and include new wells, a power plant and transmission lines, as described in Section B.6.3. Geothermal energy uses heat from the earth, extracted through geothermal wells in the form of steam or brine, which is then transported via pipeline and used to drive turbines, which drive electricity generation.

As described in Section B.6, the CPUC and BLM have determined that the Esmeralda–San Felipe Geothermal Project is so closely related to the Proposed Project as to be considered a “connected action” under CEQA/NEPA. Therefore, the Esmeralda–San Felipe Geothermal Project is discussed in this EIR/EIS in order to fully disclose the potential for a new geothermal plant and associated linears to be constructed as a result of the presence of the SRPL (if it is approved and constructed). The mitigation measures described below would reduce potentially significant impacts of the Esmeralda–San Felipe Geothermal Project; however, implementation of specific mitigation measures would be developed and executed by Esmeralda at the time of project permitting and approval.

Approval of the SRPL would not result in automatic approval of the Esmeralda–San Felipe Geothermal Project discussed below, and the project would require applications by Esmeralda Energy, LLC, compliance with CEQA and NEPA, followed by approvals from the BLM prior to construction on BLM lands.

Environmental Setting

The Salton City Class III Municipal Solid Waste Management Facility is owned and operated by the Imperial County Public Works Department and is located on BLM administered land within Truckhaven. The current total solid waste capacity of the facility is approximately 851,800 tons, with a volume capacity of over 2.5 million cubic yards. The fill rate at the facility is less than 0.5-ton per day. This landfill is permitted to accept solid waste only and is prohibited from accepting hazardous waste, radioactive waste, geothermal wastes, sewage sludge, and liquid waste.

There are two inactive Formerly Used Defense Sites (FUDS), Winona Bomb Target Sites No. 1 and 2, located on BLM administered lands within Truckhaven. Winona Bomb Target Site No. 2 is known to contain military munitions and explosives of concern (e.g., unexploded ordnance), and hence may present an explosive hazard. There are no other known hazardous sites or recorded spills within Truckhaven.

A review of the EDR database search (EDR, 2006a) provided by SDG&E for the Sunrise Powerlink project for areas along and north of SR78 and a review of the GeoTracker website (RWQCB, 2007) did not identify any UST, LUST, or other hazardous material sites other than those discussed above.

A portion of the Truckhaven Geothermal Leasing Area is within the Department of the Navy's Range Safety Zone (RSZ) C. The RSZ C is located in the southern and western half of the Truckhaven area and is intended to provide an adequate area of protected space in which military training exercises can be safely conducted without interference from general aviation traffic. There are also height and population density concerns which need to be controlled in the RSZ C.

Environmental Impacts and Mitigation Measures

As stated in BLM's Draft EIS/EIR for the Truckhaven Geothermal Leasing Area, Plans of Operation are required for surface-disturbing activities, in order to minimize adverse impacts to resources and uses in the Truckhaven Geothermal Leasing Area. This area includes the Esmeralda-San Felipe Geothermal Project area. Mitigation measures for hazardous materials generated by geothermal exploration and development would be specified in authorized use permits and would require the responsible party to take corrective actions(s) as required to comply with federal, State, and local regulations.

Due to a lack of agricultural areas within or adjacent to Truckhaven, Impact P-2 (Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas) would not occur.

Construction Impacts

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Gasoline, diesel fuel, oil, hydraulic fluid, lubricants, paints, solvents, adhesives, and cleaning chemicals used in construction activities, equipment, and vehicles can be released during construction. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. Mitigation Measures similar to SDG&E's APMS such as Mitigation Measure P-1c (Personnel trained in proper use and safety procedures for the chemicals used), Mitigation Measure P-1d (Personnel trained in refueling of vehicles), Mitigation Measure P-1e (Preparation of environmental safety plans including spill prevention and response plan), Mitigation Measure P-1f (Applicant's and/or General Contractor envi-

ronmental/health and safety personnel), and Mitigation Measure P-1g (Proper storage and disposal of generated waste) could be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Additionally, Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) could be applied to reduce the significant environmental impacts of hazardous material spills should they still occur to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

- P-1a** **Implement Environmental Monitoring Program.**
- P-1b** **Maintain emergency spill supplies and equipment.**
- P-1c** **Personnel trained in proper use and safety procedures for the chemicals used. [HS-APM-1]**
- P-1d** **Personnel trained in refueling of vehicles. [HS-APM-2]**
- P-1e** **Preparation of environmental safety plans including spill prevention and response plan. [HS-APM-3]**
- P-1f** **Applicant's and/or General Contractor environmental/health and safety personnel. [HS-APM-8]**
- P-1g** **Proper storage and disposal of generated waste. [HS-APM-10]**

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Unanticipated soil or groundwater contamination could exist at the FUDS and the solid waste management facility at Truckhaven. Possible types of contamination include gasoline and diesel fuel residuals, heavy metals, and/or other hazardous materials disposed of by the military. Additionally, there is a potential for unknown contamination to have occurred along and near area roads due to illegal dumping. Mitigation Measures similar to SDG&E's APMs for the Proposed Project such as Mitigation Measure P-2b, Mitigation Measure P-2c, and Mitigation Measure P-2d could be implemented as a part of the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified by visual staining or odor, cordoning off suspected areas of contamination and taking appropriate health and safety measures, sampling and testing of suspected material conducted, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM. Therefore, Mitigation Measures P-3a and P-3b would also need to be implemented to ensure that laboratory data are properly interpreted by trained personnel with regard to contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

- P-2b** **Stop work if contamination is detected. [HS-APM-15]**

- P-2c** **Cordon off contaminated areas.** [HS-APM-16]
- P-2d** **Notification of regulatory agencies.** [HS-APM-17]
- P-3a** **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**
- P-3b** **Documentation of compliance with measures for encountering unknown contamination.**

Impact P-4: Unexploded ordnance encountered during construction could explode and injure workers or the public (Class II)

There are two inactive FUDS, Winona Bomb Target Sites No. 1 and 2, located on BLM administered lands within Truckhaven. These inactive FUDS could present a public danger from unexploded ordinance, both to implementing geothermal exploration and production as well as to the public who would have greater access to the land due to additional roads required for geothermal development.

Additionally, a portion of the Truckhaven Geothermal Leasing Area is within the Department of the Navy's RSZ C. Excavation for wells or tower foundations or grading for access roads could encounter unexploded ordnance, resulting in death or injury to workers or the public. In order to reduce potential health hazards related to exposure to UXO, the Applicant could implement measures similar to SDG&E's for the Proposed Project. These measures would include a survey of identified FUDS database sites as well as other areas along the project transmission line ROW with historical military activities prior to the start of construction. The survey should include identification of potential UXO locations, from which a determination of what possibly would be present shall be made. After the survey is completed, the appropriate contractor shall arrange for extensive survey of identified location(s) and the removal of any UXO, if found. Impacts associated with unexploded ordinance would be significant, but implementation of Mitigation Measures P-4a and P-4b would reduce the impacts to be less than significant. Under Mitigation Measure P-4a, trained experts shall be used to investigate and remove unexploded ordnance in known and potential military areas prior to the start of construction. Mitigation Measure P-4b would require the UXO contractor to provide training to the construction contractor's personnel involved in grading and excavation-related to the identification of UXO prior to start of work. Identification and removal of UXO prior to construction and training to recognize UXO would ensure that the impact would be less than significant (Class II).

Mitigation Measure for Impact P-4: Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers or the public during construction

- P-4a** **Unexploded ordnance to be removed by trained personnel.** [HS-APM-6]
- P-4b** **Train project personnel to recognize unexploded ordnance.** [HS-APM-7]

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class II)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials at the geothermal facility during operations or maintenance of the transmission line, towers, wells or power plant. This could result in exposure of the facility, maintenance workers, and the public to hazardous materials; and could result in contamination to soil and/or groundwater. Mitigation Measures similar to SDG&E's APMs for the Proposed Project would be implemented as part of these future projects, including: Mitigation Measure P-1c (Personnel trained in proper use and safety procedures for the

chemicals used), Mitigation Measure P-1e (Preparation of environmental safety plans including spill prevention and response plan), and Mitigation Measure P-1g (Proper storage and disposal of generated waste). These measures would reduce the likelihood of spills and would reduce any significant impacts of spills, but they would not completely prevent spills from occurring. However, in the event a spill were to occur, these mitigation measures would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers, a less than significant impact (Class II)

Mitigation Measure for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

- P-1c** **Personnel trained in proper use and safety procedures for the chemicals used.** [HS-APM-1]
- P-1e** **Preparation of environmental safety plans including spill prevention and response plan.** [HS-APM-3]
- P-1g** **Proper storage and disposal of generated waste.** [HS-APM-10]

D.3.12.4 Jacumba Substation

In its testimony during the CPUC's Phase 1 hearings on the need and economics of the Proposed Project, SDG&E staff stated that a new 230/500 kV substation would be required to allow future wind generation projects to transmit generated power via the existing 500 kV Southwest Powerlink (SWPL) transmission line. The SWPL currently has limited available capacity, but if the Sunrise Powerlink Project is approved and constructed, some electricity currently carried by the SWPL will be transmitted via Sunrise, making more capacity available on the SWPL. There are a number of possible new wind generation projects near the Jacumba area (about 5 miles west of the San Diego/Imperial County line), some in San Diego County (Crestwood wind area) and some in Mexico (La Rumorosa wind area). Therefore, the impacts of this substation are evaluated as part of the Proposed Project.

This 230/500 kV substation would allow incoming transmission lines at 230 kV from wind farms in either the Crestwood or La Rumorosa areas. The power would be transformed to 500 kV in order to allow it to be transmitted via the SWPL to the Miguel Substation in San Diego. The substation is assumed to occupy about 20 acres, and while its location has not been defined by SDG&E, for the purposes of this EIR/EIS it is assumed to be located just east of the point where the Interstate 8 Alternative diverges from the SWPL. The impacts of this substation are also evaluated as a part of the wind component of the Non-Wires In-Area Renewable Generation Alternative, as defined and analyzed in Section E.5. Approval of the SRPL would not result in automatic approval of the Jacumba Substation discussed below, and the project would require applications by SDG&E, and compliance with CEQA and NEPA.

Environmental Setting

The Jacumba Substation site would be located on a relatively flat undeveloped mesa within the Jacumba Mountains, northwest of the town on Jacumba. Review of the EDR database survey (EDR, 2006a) indicates that, other than two leaking fuel tanks in the town of Jacumba, approximately 0.5 miles away from the proposed Jacumba Substation site, there are no other environmentally contaminated sites.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impact P-2 (Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas) would not occur, because there is no agricultural land within the existing SWPL transmission line corridor.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

During construction operations, hazardous materials such as vehicle fuels, oils, and other vehicle maintenance fluids would be used and stored in construction staging yards. A list of hazardous materials typically used for transmission line and substation construction that are expected to be used during project construction is presented in Table D.10-7. Gasoline, diesel fuel, oil, hydraulic fluid, lubricants paints, solvents, adhesives, and cleaning chemicals used in construction activities, equipment, and vehicles can be released during construction. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. Mitigation Measure P-1c, P-1d, P-1e, P-1f, and P-1g would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Additionally, Mitigation Measures P-1a and P-1b could be applied to reduce the significant environmental impacts of hazardous material spills should they still occur to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

- P-1a Implement Environmental Monitoring Program.**
- P-1b Maintain emergency spill supplies and equipment.**
- P-1c Personnel trained in proper use and safety procedures for the chemicals used. [HS-APM-1]**
- P-1d Personnel trained in refueling of vehicles. [HS-APM-2]**
- P-1e Preparation of environmental safety plans including spill prevention and response plan. [HS-APM-3]**
- P-1f Applicant's and/or General Contractor environmental/health and safety personnel. [HS-APM-8]**
- P-1g Proper storage and disposal of generated waste. [HS-APM-10]**

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Review of the EDR database survey (EDR, 2006a) indicates that, other than two leaking fuel tanks in the town of Jacumba, approximately 0.5 miles away from the proposed Jacumba Substation site, there are no other environmentally contaminated sites. However, there is a potential for unknown contamination to have occurred along and near roads close to the site due to illegal dumping which results in potential to encounter contamination where the Jacumba Substation site is close to these roads. The potential to encounter unknown environmental contamination is a significant impact. Mitigation Measures P-2b, P-2c, and P-2d (APMs HS-APM-15, -16, and -17) would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination would be cordoned off and appropriate health and safety measures

taken, sampling and testing of suspected material would be conducted, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM. Therefore, Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

- P-2b Stop work if contamination is detected. [HS-APM-15]**
- P-2c Cordon off contaminated areas. [HS-APM-16]**
- P-2d Notification of regulatory agencies. [HS-APM-17]**
- P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.**
- P-3b Documentation of compliance with measures for encountering unknown contamination.**

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class II)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials at the substation during facility operations. This could result in exposure of the facility, maintenance workers, and the public to hazardous materials; and could result in contamination to soil and/or groundwater. Mineral oil would be used in the new transformers, switches, circuit breakers, capacitors, and other new electrical equipment. Mineral oil is considered a hazardous material under federal regulations (CWA Section 311), and mineral oil storage or use in aboveground storage containers in levels exceeding 660 gallons in a single oil storage tank or greater than 1,320 gallons in one or multiple containers at a site is regulated under Title 40, CFR, 112–“the SPCC rule” which is part of the federal CWA. The new Jacumba Substation will require new Hazardous Material Business Plans, including a Hazardous Communication Plan, Spill Response Plan, Temporary Storage and Disposal facility permit, and SPCC Plan for the facility.

Mitigation Measure P-1c, P-1e, and P-1g would be implemented as a part of the operation of the Jacumba Substation. These measures would reduce the likelihood of spills and would reduce any significant impacts of spills, but they would not completely prevent spills from occurring. However, in the event a spill were to occur, these mitigation measures would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers, a less than significant impact (Class II)

Mitigation Measure for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

- P-1c** Personnel trained in proper use and safety procedures for the chemicals used. [HS-APM-1]
- P-1e** Preparation of environmental safety plans including spill prevention and response plan. [HS-APM-3]
- P-1g** Proper storage and disposal of generated waste. [HS-APM-10]

D.3.12.5 SCE La Rumorosa Wind Project

Environmental Setting

United States. A new 230 kV transmission line would be required to connect the “Rumorosa Wind Developers II” (RWD) to the existing 500 kV SWPL (about 10 miles to the north of the existing Tijuana/La Rosita 230 kV Transmission line). The 1.7 miles of new 230 kV transmission line would be sited on primarily private land in the San Diego County, approximately 1000 feet west of the outskirts of the town of Jacumba. Review of the EDR database survey (EDR, 2006a) indicates that, other than two leaking fuel tanks in the town of Jacumba, there are no environmentally contaminated sites in the area.

Mexico. The RWD wind turbines and associated transmission lines would be sited in La Rumorosa, Baja California. No specific contaminated sites are known in this region. Research on general contamination in the Baja California region, and specifically in Tecate was conducted using the Tecate and Baja California websites, and the U.S.EPA documentation. General water contamination is known to occur in La Rumorosa, especially during the summer months when the population of La Rumorosa almost doubles with tourists from neighboring Mexicali. The infrastructure at La Rumorosa is unequipped to handle this surge of people (Tecate Government, 2007). In addition, general environmental problems have been documented all along the U.S./Mexico border. These problems include: illegal dumping, agricultural drainage, airborne dust and pesticide exposure, inadequate water supplies, insufficient or nonexistent waste facilities and degradation of natural resources and ecosystems (EPA, 2007). Oftentimes, rural communities such as La Rumorosa or Jácume are at a greater risk as they may not have adequate water supply or waste treatment (EPA, 2007).

Environmental Impacts and Mitigation Measures

The RWD project would not traverse any lands currently or historically used for military purposes; therefore, Impact P-4: Areas used by the military may contain unexploded ordinance (UXO) and could explode and injure workers during construction would not occur.

Construction Impacts

Impact P 1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

United States. Hazardous materials such as vehicle fuels and oils and paints would be used and stored during excavation and grading of the transmission line structures and facilities (see Table D.10-7), resulting in a potential for environmental contamination due to improper handling and/or storage of hazardous materials, a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program), P-1b (Maintain emergency spill supplies and equipment), P-1g (Properly

store and dispose of generated waste), H-2b (No storage of fuels and hazardous materials near sensitive water resources), and H-2c (Proper disposal and clean-up of hazardous materials) would reduce the significant environmental impacts to less than significant (Class II).

Mexico. In addition to the construction hazards described above, helicopters may be used to support construction activities in areas where access is limited or where there are environmental constraints to accessing the construction area with standard construction vehicles and equipment. All helicopter construction and maintenance activities would be based at a fly yard. Refueling activities for the helicopters could potentially result in soil contamination from improper handling and storage of helicopter fuel at the staging areas or during refueling, a potentially significant impact.

Ground disturbance for the RWD project and associated facilities would consist primarily of excavation for the following facilities: tower/turbine structures, meteorological towers, switchyard, underground interconnection systems between the tower/turbines and switchyard, transmission line, and operation and maintenance facilities. Grading of new access/spur roads would also be required.

Soil or groundwater contamination resulting from the improper handling and/or storage of hazardous materials is generally considered to be mitigable to less than significant levels. Mitigation recommended herein includes: (1) The prohibition of storage of fuels and hazardous materials within 200 feet of groundwater supply wells and within 400 feet of community or municipal wells; (2) prohibition of disposal of hazardous materials onto the ground, underlying groundwater, and any surface water; (3) removal of potentially hazardous materials to a hazardous waste facility permitted or otherwise authorized to treat, store, or dispose of such materials; and (4) in the event of a release of hazardous materials to the ground, the release will be promptly cleaned up in accordance with applicable regulations. Mitigation Measures P-1a, P-1b, and P-1g are also recommended. With the implementation of the recommended mitigation, Impact P-1 could be reduced to an insignificant level (Class II).

Mitigation Measures for Impact P 1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

- P-1a** **Implement Environmental Monitoring Program.**
- P-1b** **Maintain emergency spill supplies and equipment.**
- P-1g** **Proper storage and disposal of generated waste.** [HS-APM-10]
- H-2b** **No storage of fuels and hazardous materials near sensitive water resources.** [WQ-APM-9]
- H-2c** **Proper disposal and clean-up of hazardous materials.** [WQ-APM-13]

Impact P-2: Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas (No Impact for the United States, Class II for Mexico)

United States. As discussed under Section D.6.19, Agriculture, the RWD project would not traverse any agricultural lands in the United States; therefore, no residual pesticides and/or herbicides would be encountered during construction.

Mexico. Residual pesticide and herbicide contamination of the soil and/or groundwater may exist along the portion of the RWD transmission route that passes north of agriculture near Luis Echeverria Alvarez. This portion of the transmission route would traverse the existing Tijuana/Mexicali ROW and thus the likelihood of there being residual pesticide or herbicide contamination is low. Still there are potential health hazards to construction workers and the public due to exposure to pesticide or herbicide

contaminated soil and/or groundwater. The impact would be significant as pesticide and herbicide contamination is not always readily apparent by visual or olfactory indicators. Mitigation Measure P-2a (Test for residual pesticides/herbicides), P-2b (Stop work if contamination is detected.), P-2c (Cordon off contaminated areas.), and P-2d (Notify regulatory agencies.) is required to reduce this impact to less than significant (Class II).

Mitigation Measure for Impact P-2: Residual Pesticides and/or Herbicides could be encountered during grading or excavation in agricultural areas

- P-2a** **Test for residual pesticides/herbicides in agricultural areas.**
- P-2b** **Stop work if contamination is detected.** [HS-APM-15]
- P-2c** **Cordon off contaminated areas.** [HS-APM-16]
- P-2d** **Notification of regulatory agencies.** [HS-APM-17]

Impact P-3: Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading (Class II for the United States, No Available Data for Mexico)

United States and Mexico. Although unanticipated contamination along the RWD project is unlikely due to the undeveloped nature and open space use of the surrounding areas, there is a slight potential for unknown contamination to have occurred along and near area roads due to illegal dumping which results in a potential to encounter contamination where the RWD project crosses these roads.

Impacts associated with previously unknown soil and/or groundwater contamination are generally considered to be mitigable to less than significant levels. Mitigation recommended herein includes: (1) If during excavation soil or groundwater contamination is suspected (e.g., unusual soil discoloration or strong odor), the contractor or subcontractor shall immediately stop work and notify the General Contractor's assigned Health & Safety Officer and/or the applicants Field Environmental Representative; (2) preliminary samples of the soil, groundwater, or material shall be taken by a trained individual and the samples shall be sent to a California Certified Laboratory (in the U.S.) or to an appropriate facility (in Mexico) for characterization; and (3) if contamination is found above regulatory limits, the regulatory agency (e.g., RWQCB or CUPA) responsible for responding to and for providing environmental oversight of the region shall be notified in accordance with State or local regulations. Mitigation Measure P-3a, P-2b, P-2c, and P-2d are recommended. Incorporation of these measures would reduce the impact to an insignificant level (Class II).

Mitigation Measures for Impact P-3: Previously unknown soil and/or groundwater contamination could be encountered during excavation or grading

- P-3a** **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**
- P-2b** **Stop work if contamination is detected.** [HS-APM-15]
- P-2c** **Cordon off contaminated areas.** [HS-APM-16]
- P-2d** **Notification of regulatory agencies.** [HS-APM-17]

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II for the United States, No Available Data for Mexico)

United States. Excavation or grading along the RWD transmission line could result in mobilization of soil contamination from the leaking fuel tanks near the town of Jacumba. Mitigation includes investigation of known contaminated sites prior to construction and disposal of hazardous waste in accordance with federal, State, and local regulations. Mitigation Measure P-6b is also recommended. With the implementation of the noted measures, Impact P-6 would be reduced to an insignificant level (Class II).

Mexico. Contamination along the RWD project wind farm and transmission line could have occurred. Although the transmission line on new ROW traverses primarily undeveloped nature and open space areas, the wind farm and the transmission line on existing ROW are situated west of the La Rumorosa Substation and traverse south of the town of La Rumorosa and there is a potential for contamination to have occurred along and near area roads due to illegal dumping which results in a potential to encounter contamination.

Should contaminated sites be encountered, Mitigation Measure P-7a includes investigation of known contaminated sites prior to construction and disposal of hazardous waste in accordance with federal, Municipality, and local regulations. With the implementation of the noted measures, Impact P-6 could be reduced to an insignificant level (Class II).

Mitigation Measures for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-7a Evaluate contaminated sites.

P-7b Investigate contaminated sites. [HS-APM-5]

Operational Impacts

The wind turbines would tie into the SWPL transmission line via the Jacumba Substation, which would require construction of an overhead transmission line. Impact PS-1 (Transmission line operation causes radio and television interference), Impact PS-2 (Transmission line operation causes induced currents and shock hazards in joint use corridors), Impact PS-3 (Electric fields can affect cardiac pacemakers), PS-4 (Project Structures would be affected by wind and earthquakes) and Impact PS-5 (Transmission or substation facilities can suffer an outage from terrorism or wildfire) are addressed in Section D.10.20.

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class II)

United States and Mexico. Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation or maintenance of the transmission line facilities, wind tower/turbines, and other associated facilities. This impact would be significant without mitigation. However, implementation of mitigation measures listed below would reduce impacts to soil and groundwater to a less than significant level (Class II).

Mitigation Measures for Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance

- P-1c Personnel trained in proper use and safety procedures for the chemicals used.** [HS-APM-1]
- P-1e Preparation of environmental safety plans including spill prevention and response plan.** [HS-APM-3]
- P-1g Proper storage and disposal of generated waste.** [HS-APM-10]

D.10.13 Overall Public Health and Safety Impacts of Proposed Project

Construction Impacts

Public Health and Safety of the Proposed Project, Future Transmission System Expansion, Connected Actions, and Indirect Effects would not result in any significant, unmitigable impacts (Class I). Spills and leaks of hazardous materials during construction or operation activities could result in soil or groundwater contamination (Impact P-1, Impact P-5). SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste), or Mitigation Measure P-1c through P-1g, similar to the APMs above, would be included as part of the project in order to reduce the likelihood of spills. Additionally, Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would be required to reduce the significant environmental impacts to less than significant (Class II).

The potential presence of residual pesticide and herbicide contamination of the soil and/or groundwater in the agricultural areas along Proposed Project or Indirect Effects represents a significant impact due to the health hazards to construction workers and the public stemming from exposure to pesticide or herbicide contaminated soil and/or groundwater (Impact P-2). SDG&E's APMs HS-APM-15, -16, and -17 (or similar Mitigation Measures P-2b through P-2d) would be incorporated into the project in order to reduce the significance of this impact. However, even with the implementation of APMs, the impact would be significant as pesticide and herbicide contamination is not always readily apparent by visual or olfactory indicators. Mitigation Measure P-2a (Test for residual pesticides/herbicides) is required to reduce this impact to less than significant (Class II).

Although unanticipated contamination along the non-military portions of the Proposed Project, Connected Action and Indirect Effects project ROW is unlikely due to the undeveloped nature of the surrounding areas, there is a potential for unknown contamination to have occurred due to illegal dumping (Impact P-3). SDG&E's APMs HS-APM-15, -16, and -17 (or similar Mitigation Measures P-2b through P-2d) would be incorporated into the project to reduce the significance of this impact. Also, Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Several leaking underground storage tank sites have been identified along the Coastal Link alignment of the Proposed Project, primarily near the proposed underground segment. The presence of this known contaminated site near the alignment presents a potential for contaminated soil and/or groundwater to

have migrated to the project ROW and thus be encountered during construction, a significant impact (Impact P-7). SDG&E will implement APMs HS-APM-5 and HS-APM-10 to reduce impacts from known contaminated sites. Nevertheless, environmental impacts would still be significant if contaminated sites near the project ROW were not adequately characterized and contamination from these areas has migrated to the soil or groundwater within the project ROW. Mitigation Measure P-7a (Evaluate contaminated sites) would reduce potential health hazards related to exposure of construction personnel and/or the public to hazardous materials to less than significant (Class II).

Operational Impacts

Public Health and Safety of the Proposed Project, Future Transmission System Expansion, Connected Actions, and Indirect Effects would not result in any significant, unmitigable impacts (Class 1). Spills and leaks of hazardous materials during operation activities could result in soil or groundwater contamination (Impact P-5). SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste), or Mitigation Measure P-1c through P-1g, similar to the AMPs above, would be included as part of the project in order to reduce the likelihood of spills. Additionally, Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would be required to reduce the significant environmental impacts to less than significant (Class II).

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Environmental Impacts and Mitigation Measures for Alternatives Along Proposed Project Route – Environmental Contamination

Table D.10-15 summarizes the impacts that have been identified for the alternatives along the Proposed Project route.

Table D.10-15. Impacts Identified – Alternatives – Public Health and Safety (Contamination)

Impact No.	Description	Impact Significance
FTHL Eastern Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-2	Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
SDG&E West of Dunaway Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-2	Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
SDG&E West Main Canal–Huff Road Modification Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-2	Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
Partial Underground 230 kV ABDSP SR78 to S2 Alternative (with or without All Underground Option)		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II

Table D.10-15. Impacts Identified – Alternatives – Public Health and Safety (Contamination)

Impact No.	Description	Impact Significance
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
P-7	Excavation and grading could result in mobilization of existing soil or groundwater contamination from known sites	Class III
Overhead 500 kV ABDSP within Existing ROW Alternative (with or without East of Tamarisk Option)		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
Santa Ysabel Existing ROW Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
P-7	Excavation and grading could result in mobilization of existing soil or groundwater contamination from known sites	Class II
Santa Ysabel Partial Underground Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
P-7	Excavation and grading could result in mobilization of existing soil or groundwater contamination from known sites	Class II
Santa Ysabel SR79 All Underground Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III

Table D.10-15. Impacts Identified – Alternatives – Public Health and Safety (Contamination)

Impact No.	Description	Impact Significance
SDG&E Mesa Grande Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
CNF Existing 69 kV Route Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
Oak Hollow Road Underground Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
San Vicente Road Transition Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
Chuck Wagon Road Transition Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
Pomerado Road to Miramar Area North		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II

Table D.10-15. Impacts Identified – Alternatives – Public Health and Safety (Contamination)

Impact No.	Description	Impact Significance
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
P-7	Excavation and grading could result in mobilization of existing soil or groundwater contamination from known sites	Class II
Los Peñasquitos Canyon Preserve and Mercy Road Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
P-7	Excavation and grading could result in mobilization of existing soil or groundwater contamination from known sites	Class III
Black Mountain to Park Village Road Underground Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-3	Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
Coastal Link System Upgrade Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-4	Areas used by the military may contain unexploded ordnance (UXO) and could explode and injure workers during construction	Class III
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III
P-6	Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers	Class III
Top of the World Substation Alternative		
P-1	Soil or groundwater contamination results due to improper handling and/or storage of hazardous materials during construction activities	Class II
P-5	Soil or groundwater contamination could result from accidental spill or release of hazardous materials during transmission line and substation operations and maintenance	Class III

D.10.14 Imperial Valley Link Alternatives Impacts and Mitigation Measures

There are three alternatives analyzed in the Imperial Valley Link, the FTHL Eastern Alternative, the SDG&E West of Dunaway Alternative, and the SDG&E West Main Canal–Huff Road Modification Alternative.

EDR database search provided by the applicant for a one-mile-wide corridor (one-half mile on both sides) along portions of the Imperial Link alternative alignments and for a one-half-mile-wide corridor (one-quarter mile on both sides) for new and changed alternative alignments were reviewed and analyzed (EDR, 2006a, 2006b, 2007b, and 2007f). Sites within 0.25 miles of the alternative routes with known environmental contamination or that store, use, and dispose of significant quantities of hazardous materials were identified. These sites have the potential to have contributed environmental contamination to the area within the alternative ROWs.

D.10.14.1 FTHL Eastern Alternative

This alternative was developed by the EIR/EIS team as a way to avoid almost 2 miles within the Flat-Tailed Horned Lizard (FTHL) Management Area. Instead the 500 kV overhead route would follow section lines within agricultural lands and would be approximately 1.5 miles shorter than the proposed route.

Environmental Setting

The FTHL Eastern Alternative alignment traverses agricultural property. The alignment passes along the western edge of a dairy and traverses along and through agricultural properties used for a variety of crops. This alternative alignment crosses numerous small rural roads, Interstate 8, railroad tracks of the Arizona and San Diego Railroad, many small irrigation ditches, and the Westside Main Canal twice. Based on review of an EDR database review for this alignment (EDR, 2007b), there are no hazardous material sites within 0.25 miles of the FTHL Eastern Alternative with a potential to impact the project. The only site listed in the database is the Kuhn Farms Dairy at 1870 Jeffrey Road in El Centro, which is listed on the California Waste Discharge System list (CA WDS) with a NPDES permit for discharging non-hazardous solid waste and wastewater. This site has no potential to cause hazardous material contamination along the FTHL Eastern Alternative alignment.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impacts P-4 (encountering unexploded ordnance) and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the FTHL Eastern Alternative alignment and are therefore not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks. This would be a significant impact. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. There is potential for incidents involving release of hazardous materials from leaking vehicles and construction equipment or spills during construction activities. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper

storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-2: Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas (Class II)

The presence of residual pesticide and herbicide contamination of the soil and/or groundwater along this primarily agricultural alignment presents a potential significant impact due to the potential health hazards to construction workers and the public due to exposure to pesticide or herbicide contaminated soil or groundwater. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, area cordoned off and appropriate health and safety measures taken, sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, even with the implementation of APMs, the impact would be significant as pesticide and herbicide contamination is not always readily apparent by visual or olfactory indicators. Mitigation Measure P-2a (Test for residual pesticides/herbicides in agricultural areas) is required to reduce this impact to less than significant (Class II).

Mitigation Measure for Impact P-2: Residual Pesticides and/or Herbicides could be encountered during grading or excavation in agricultural areas

P-2a Test for residual pesticides/herbicides in agricultural areas.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Ground disturbance along the transmission line route for this alternative would be limited to excavation at and near transmission structures and grading of new access roads along and to the alignment. No impacts from existing environmentally contaminated sites are expected along this alternative. Although unanticipated contamination along this alternative ROW is unlikely due to the agricultural and rural nature of the areas, there is a potential for unknown contamination to have occurred along and near the area roads due to illegal dumping. The potential to encounter unknown environmental contamination is a significant impact. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these inci-

dents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore, Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**

P-3b **Documentation of compliance with measures for encountering unknown contamination.**

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission line, towers, and other associated transmission components. This could result in exposure of the facility, maintenance workers, and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the

soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.14.2 SDG&E West of Dunaway Alternative

This 6.1-mile alternative was suggested by SDG&E and approved by the proposed land use developer in the area. It would be an overhead 500 kV line, and would be 2.2 miles longer than the Proposed Project.

Environmental Setting

The SDG&E West of Dunaway Alternative segment traverses primarily undeveloped open desert, and a small amount of apparently inactive agricultural land near its north end. The undeveloped open desert land consists primarily of flat to gently sloping terrain with sparse scrub vegetation. The alignment crosses I-8, paved and unpaved rural roads, tracks of the Arizona and San Diego Railroad, and numerous small washes and local arroyos. Based on the review of the EDR database search provided by SDG&E (EDR, 2006a) and an EDR database (EDR, 2007f) obtained for portions of this alternative not covered by SDG&E's databases, there are no hazardous material sites within 0.25 miles of the West of Dunaway Alternative.

Environment Impacts and Mitigation Measures

Construction Impacts

Impacts P-4 (encountering unexploded ordnance) and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the SDG&E West of Dunaway Alternative alignment and are therefore not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks, resulting in a significant impact (Class II). A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. There is potential for incidents involving release of hazardous materials from leaking vehicles and construction equipment or spills during construction activities. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain

emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-2: Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas (Class II)

The potential presence of residual pesticide and herbicide contamination of the soil and/or groundwater near the northern end of the SDG&E West of Dunaway Alternative, where it crosses through agricultural land, represents a potential significant impact to the potential health hazards to construction workers and the public due to exposure to pesticide or herbicide contaminated soil or groundwater. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by: stopping work if suspected contamination is identified by visual staining or odor; cordoning off the area and appropriate health and safety measures taken; sampling and testing of suspected material; and if contamination is found to be greater than regulatory limits, the appropriate agency (RWQCB or CUPA) shall be notified. Nevertheless, even with the implementation of APMs, the impact would be significant as pesticide and herbicide contamination is not always readily apparent by visual or olfactory indicators. Mitigation Measure P-2a (Test for residual pesticides/herbicides in agricultural areas) is required to reduce this impact to less than significant (Class II).

Mitigation Measure for Impact P-2: Residual Pesticides and/or Herbicides could be encountered during grading or excavation in agricultural areas

P-2a Test for residual pesticides/herbicides in agricultural areas.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Although unanticipated contamination along the SDG&E West of Dunaway Alternative ROW is unlikely due to the undeveloped and agricultural nature of the area, there is a potential for unknown contamination to have occurred along and near the area roads due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by: stopping work if suspected contamination is identified by visual staining or odor; suspected areas of contamination cordoned off and appropriate health and safety measures taken; conducting sampling and testing of suspected material; and if contamination is found to be greater than regulatory limits, the appropriate agency (RWQCB or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a (appoint individuals with correct training for sampling, data review, and regulatory coordination) and P-3b (documentation of compliance with measures for unknown contamination) are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting

to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**

P-3b **Documentation of compliance with measures for encountering unknown contamination.**

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission line, towers, and other associated transmission components along the SDG&E West of Dunaway Alternative. This could result in exposure of the facility, maintenance workers, and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project struc-

tures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.14.3 SDG&E West Main Canal–Huff Road Modification Alternative

This 4.9-mile alternative would follow the IID Westside Main Canal to the east-northeast, and then turn north on Huff Road. Existing IID 92 kV transmission lines are located on the west side of Huff Road along most of this segment; however, where the IID line would turn northwest, this alternative would continue straight along Huff Road to reconnect with the Proposed Project 0.2 miles south of Wheeler Road (MP 15.9). The lengths of the alternative and the proposed routes would be essentially the same; however, this route would avoid direct effects to the Bullfrog Farms and also to the Raceway development.

Environmental Setting

The SDG&E West Main Canal–Huff Road Modification Alternative alignment primarily traverses along and across agricultural property that is used for a variety of crops. This alternative alignment crosses the Fillaree Canal twice, several small irrigation ditches, and numerous small rural roads. Based on review of EDR database search provided by SDG&E (EDR, 2006a and 2006b), there are no hazardous material sites within 0.25 miles of the SDG&E West Main Canal–Huff Road Modification Alternative.

Environment Impacts and Mitigation Measures

Construction Impacts

Impacts P-4 (encountering unexploded ordnance) and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the SDG&E West Main Canal–Huff Road Modification Alternative alignment and are therefore not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) are required to reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-2: Residual pesticides and/or herbicides could be encountered during grading or excavation in agricultural areas (Class II)

The presence of residual pesticide and herbicide contamination of the soil and/or groundwater along this alignment in primarily agricultural land presents a significant impact to construction workers and the public due to exposure to pesticide or herbicide contaminated soil and/or groundwater. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by: stopping work if suspected contamination is identified by visual staining or odor; cordoning off the area and appropriate health and safety measures taken; sampling and testing of suspected material; and if contamination is found to be greater than regulatory limits, the appropriate agency (RWQCB or CUPA) shall be notified. Nevertheless, even with the implementation of APMs, the impact would be significant as pesticide and herbicide contamination is not always readily apparent by visual or olfactory indicators. Mitigation Measure P-2a (Test for residual pesticides/herbicides in agricultural areas) is required to reduce this impact to less than significant (Class II).

Mitigation Measure for Impact P-2: Residual Pesticides and/or Herbicides could be encountered during grading or excavation in agricultural areas

P-2a Test for residual pesticides/herbicides in agricultural areas.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Although unanticipated contamination along the SDG&E West Main Canal–Huff Road Modification Alternative ROW is unlikely due to the agricultural and rural nature of the surrounding area, there is a potential for unknown contamination to have occurred along and near the area roads due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**

P-3b **Documentation of compliance with measures for encountering unknown contamination.**

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission line, towers, and other associated transmission components for the SDG&E West Main Canal–Huff Road Modification Alternative. This could result in exposure of the facility, maintenance workers, and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public, the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.15 Anza-Borrego Link Alternatives Impacts and Mitigation Measures

Two alternatives are considered in the Anza-Borrego Link: the Partial Underground 230 kV ABDSP SR78 to S2 Alternative (also considered with an All Underground Option) and the Overhead 500 kV ABDSP within Existing ROW Alternative.

An EDR database search (EDR, 2006a) provided by the applicant for a one-mile-wide corridor (one-half mile on both sides) along the Anza-Borrego Link alternative alignments was reviewed and analyzed for sites within 0.25 miles of the alternative routes with known environmental contamination or that store, use, and dispose of significant quantities of hazardous materials. Sites were identified with the potential to have created environmental contamination in the alternative's ROWs.

D.10.15.1 Partial Underground 230 kV ABDSP SR78 to S2 Alternative

This alternative was developed by the EIR/EIS team and would include installation of a double-circuit bundled 230 kV line (as opposed to an overhead 500 kV with the Proposed Project) that would be installed underground in SR78 through ABDSP. The proposed Central East Substation would not be constructed with this alternative and approximately 2 miles of transmission line (one mile of 500 kV and one mile of 230 kV) to and from that substation would be eliminated.

A new 500 kV/230 kV substation would be constructed adjacent to the existing IID San Felipe Substation to accommodate the new transmission line. There is also an *All Underground Option* considered for this alternative, in which the entire length of the 230 kV transmission line between the San Felipe Substation and the connection to the Proposed Project would be installed underground in SR78 and S2.

Environmental Setting

The Partial Underground 230 kV ABDSP SR78 to S2 Alternative alignment would be constructed in roads and highways that traverse scattered rural residential, undeveloped open desert land, and open space wilderness/recreation areas of ABDSP. The underground portion of the Partial Underground 230 kV ABDSP SR78 to S2 Alternative is in roads in primarily flat to gently sloping undeveloped desert terrain consisting of open desert with scattered scrub vegetation and that is dissected by numerous small washes and local arroyos. Overhead portions of the transmission line would be constructed on gently to moderately sloping hills along the southwestern and western edges of the San Felipe Hills. The hills are primarily open desert with scattered scrub brush and scattered rural residences.

Based on review of the EDR database search (EDR, 2006a), there are four hazardous material sites within 0.25 miles of the Partial Underground 230 kV ABDSP SR78 to S2 Alternative route with potential to impact the project. All are in the Borrego Springs area. These sites are summarized in Table D.10.16.

Table D.10-16. Identified Hazardous Material Sites within 0.25 Miles of the Partial Underground 230 kV ABDSP SR78 to S2 Alternative

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
8	CA State Vehicle Recreation/Ocotillo Wells	5172 Highway 78, Borrego Springs	SWEEPS UST, HIST UST	One unleaded underground fuel tank listed.
12	Red Barn	5965 Highway 78, Borrego Springs	SWEEPS UST	Two 4000 gallon gasoline USTs listed.
12	Burro Bend Mobil	6001 Highway 78, Borrego Springs	SWEEPS UST, HIST UST	Three gasoline USTs listed. RWQCB GeoTracker ³ website lists the site as a LUFT (leaking underground fuel tank) site and indicates the tanks have been removed and the site is undergoing remediation for gasoline leak. Leak affected local groundwater and potable wells.
20	Elephant Tree Ranger Station	7205 Split Mountain Road, Borrego Springs	SWEEPS UST, SD Co. HMMD	Site is listed as having one 550 gallon gasoline UST.

Source: EDR, 2006a.

1 EDR Environmental Information Data Site I.D. Number.

2 See Appendix 13 for Detailed Description of Regulatory Agency Listings.

STATE AND LOCAL DATABASES

HIST UST: Hazardous Substance Storage Container Database, a historical listing of UST sites.

SWEEPS UST: Statewide Environmental Evaluation and Planning System, listing of USTs from 1980s.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

3 RWQCB GeoTracker –GeoTracker is a geographic information system (GIS) that provides online access to environmental data warehouse which tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies.

Environment Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered) and P-4 (encountering unexploded ordnance) would not occur along the Partial Underground 230 kV ABDSP SR78 to S2 Alternative alignment and are therefore not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the transmission line and substation expansion, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would

reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Three sites currently listed as having underground tanks are located near the underground portion of the alignment, with one (the Elephant Tree Ranger Station) also located near the IID San Felipe Substation, that could have created unknown soil or groundwater contamination due to unreported or unidentified leaks. If present, such contamination could be encountered during trench excavation, a significant impact. Although unanticipated contamination along the other portions of the Partial Underground 230 kV ABDSP SR78 to S2 Alternative ROW is unlikely due to the primarily undeveloped and rural nature of the area, there is an additional potential for unknown contamination to have occurred along and near the area roads due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore, Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class III)

The environmental database review of this alternative (EDR, 2006a; RWQCB, 2007) indicates that one site with known contamination (undergoing remediation) is listed along an underground portion of the Partial Underground 230 kV ABDSP SR78 to S2 Alternative at the intersection of SR78 and Split Mountain Road, at 6001 SR78. The presence of this known contaminated site adjacent to the alignment creates a potential for contaminated soil and/or groundwater to have migrated to the project ROW and thus be encountered during trench excavation, a significant impact. SDG&E will implement APMs HS-

APM-5 and HS-APM-10 to reduce impacts from known contaminated sites. HS-APM-5 requires that SDG&E investigate all California Government Code §65962.5 sites that along the project ROW that could potentially impact the project. HS-APM-10 requires that all hazardous waste be stored and disposed of in accordance with federal, State, and local requirements.

Nevertheless, environmental impacts would still be significant if contaminated sites near the project ROW were not adequately characterized and contamination from these areas has migrated to the soil or groundwater within the project ROW. In order to reduce potential health hazards related to exposure of construction personnel and/or the public to hazardous materials in the soil, groundwater, or surface water to less than significant, SDG&E will implement Mitigation Measure P-7a (Evaluate contaminated sites). This mitigation measure will reduce environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-7a Evaluate contaminated sites.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from an accidental spill or release of hazardous materials during operation or maintenance of the equipment at the expanded San Felipe Substation, and of transmission lines, towers, and other associated transmission components for the Partial Underground 230 kV ABDSP SR78 to S2 Alternative. This could result in exposure of the facility and maintenance workers, and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would

also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

San Felipe Substation

The Partial Underground 230 kV ABDSP SR78 to S2 Alternative would require construction of a major 230/500 kV substation adjacent to the existing IID San Felipe Substation. This would necessitate site preparation involving grading and other ground disturbing activities. This area is included within the area for which an EDR database review was conducted for the Proposed Project. Public health and safety impacts during construction and operations would be the same as those described for the transmission line in this alternative. Construction at the substation site would require implementing the same APMs and mitigation measures as would apply to the transmission line. As a consequence, impacts would remain at a less than significant level.

All Underground Option

In the All Underground Option, those two parts of the Partial Underground 230 kV SR78 to S2 Alternative that would be on overhead structures are put underground. Specifically, overhead segments from MP SR-25 to MP SR-26, and from MP SR 29 to near MP SR-37.4 would be replaced by corresponding underground segments. These underground segments would be within SR78 and SR2, rather than cross country, as would occur under the alternative. A transition tower structure would be required near MP SR 37.4 to bring the line overhead once again. Ground disturbance for the additional underground portion of the alternative would require excavation of trenches for the duct banks and associated vaults, varying from 7 to 12 feet in width and 6 to 11 feet in depth.

Impacts to public health and safety during construction would be similar to those described above for the underground segments of the Partial Underground 230 kV SR78 to S2 Alternative. The option would involve more trenching than would occur under the alternative itself. However, the same APMs and mitigation measures would apply to the option as to the overhead transmission line. Therefore, impacts would remain less than significant with implementation of the APMs and mitigation measures described for the alternative.

D.10.15.2 Overhead 500 kV ABDSP within Existing ROW Alternative

The alternative would differ from the proposed route in the Grapevine Canyon area (in the Angelina Springs Cultural District), in the vicinity of Tamarisk Grove Campground, and in a few areas east of Tamarisk Grove Campground along SR78. The alternative would remain within the existing SDG&E 69 kV ROW/easement. This alternative would eliminate towers within State-designated Wilderness. Undergrounding of the existing 69 kV and 92 kV lines would not occur with this alternative; those lines would be underbuilt on Delta lattice towers.

The *East of Tamarisk Grove Campground 150-Foot Option* was suggested by SDG&E in which the alternative would follow the Proposed Project route in the 150-foot proposed alignment, and not the existing ROW, between the eastern Park boundary (MP 60.9) to Tamarisk Grove Campground (MP 74.8) near the SR78/Highway S3 intersection. Similar to the Proposed Project described in Section B.2.2, SDG&E would underbuild and underground the existing 92 kV and 69 kV lines.

Environmental Setting

The entire length of the Overhead 500 kV ABDSP within Existing ROW Alternative passes through open space wilderness/recreation areas in ABDSP. The area consists of undeveloped open desert land and scattered recreational facilities such as campgrounds and hiking trails. This alternative alignment traverses primarily flat to gently sloping terrain with scattered scrub vegetation and numerous small washes and local arroyos. From approximately MP OH-18 the alignment runs along San Felipe Creek wash to the northwest through Grapevine Canyon, where the terrain is moderately steep and consists of undeveloped dissected desert terrain and desert washes with scattered scrub brush. Generally the alignment parallels existing paved and unpaved access roads.

Based on review of the EDR database search (EDR, 2006a), there are no hazardous material sites within 0.25 miles of the Overhead 500 kV ABDSP within Existing ROW with potential to impact the project.

Environment Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered), P-4 (encountering unexploded ordnance), and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the Overhead 500 kV ABDSP within Existing ROW alignment and therefore are not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks during construction of the Overhead 500 kV ABDSP within Existing ROW Alternative alignment. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Although unanticipated contamination along the Overhead 500 kV ABDSP within Existing ROW is unlikely due to the undeveloped nature of the area, there is a potential for unknown contamination to have occurred along and near area roads due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of transmission lines, towers, and other associated transmission components for the Overhead 500 kV ABDSP within Existing ROW Alternative. This could result in exposure of the maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to

hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

East of Tamarisk Grove Campground 150-Foot Option

The East of Tamarisk Grove Campground 150-Foot Option was suggested by SDG&E. In this option, the first part of the Overhead 500 kV ABDSP within Existing ROW Alternative would follow the Proposed Project route from the eastern Park boundary (MP 60.9) to Tamarisk Grove Campground (MP 74.8.) From that point, the alignment would continue northwest, as described in the alternative. Because this option incorporates a portion of the Proposed Project, the impacts would be the same, and applicable APMs and mitigation measures for the option would be the same as for the Proposed Project. Impacts to public health and safety would be less than significant.

D.10.16 Central Link Alternatives Impacts and Mitigation Measures

Four Central Link Alternatives are considered in this section: the Santa Ysabel Existing ROW Alternative, the Santa Ysabel Partial Underground Alternative, the Santa Ysabel SR79 All Underground Alternative, and the Mesa Grande Alternative.

An EDR database search (EDR, 2006a) provided by the applicant for a one-mile-wide corridor (one-half mile on both sides) along portions of the Central Link alternative alignments and a new EDR database search (EDR, 2007e) for a one-half mile wide corridor (one-quarter mile on both sides) for new and changed alternative alignments were reviewed and analyzed for sites within 0.25 miles of the alternative routes with known environmental contamination and sites that store, use, and dispose of significant

quantities of hazardous materials which have the potential to have resulted in environmental contamination within the alternative ROWs.

D.10.16.1 Santa Ysabel Existing ROW Alternative

This alternative would follow an existing 69 kV transmission line ROW on the west side of SR79 in the northern half and east of SR79, along the toe of the hill slope in the southern portion of the alternative. This route would pass east of the existing Santa Ysabel Substation and continue to follow the existing 69 kV line south of SR78 until it rejoins the proposed corridor.

Environmental Setting

The Santa Ysabel Existing ROW Alternative is an overhead alignment that would traverse along the edge of the Santa Ysabel Valley crossing through scattered rural residential and undeveloped open ranch land. The terrain consists of a mix of gently sloping hills and flat to gently sloping alluvial fans and valley floor, with grasslands and scattered scrub vegetation. The alignment would also pass by and through the eastern end of the community of Santa Ysabel.

Based on review of the EDR database search (EDR, 2006a and 2007e), there are two hazardous material sites within 0.25 miles of the Santa Ysabel Existing ROW Alternative route with potential to impact the project. These sites are summarized in Table D.10-17.

Table D.10-17. Identified Hazardous Material Sites within 0.25 Miles of the Santa Ysabel Existing ROW Alternative

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
1	Santa Ysabel Service	30350 Highway 78, Santa Ysabel	LUST, Cortese	Leaking gasoline UST with groundwater affected. Leak discovered during tank closure. Site is currently undergoing post remediation monitoring.
2	Santa Ysabel Fuel Stop/ D & M Service	30351 Highway 78, Santa Ysabel	HAZNET, SD Co. HMMD	Three active fuel USTs listed, one diesel and two gasoline. Generates small amounts of hazardous waste consisting of waste oil, used oil filters, and other misc. organic and non-organic liquids.

Source: EDR, 2007e.

1 EDR Environmental Information Data Site I.D. Number.

2 See Appendix 13 for Detailed Description of Regulatory Agency Listings.

STATE AND LOCAL DATABASES

LUST: Leaking Underground Storage Tank Incident Reports, contains an inventory of reported leaking underground storage tank incidents.

CORTESE: "Cortese" Hazardous Waste & Substances Sites List.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

Environment Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered) and P-4 (encountering unexploded ordnance) would not occur along the Santa Ysabel Existing ROW Alternative and are therefore not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Two hazardous material sites are located 650 feet east of the alignment in the town of Santa Ysabel, approximately between MPs SYR-7.1 and SYR-7.2. Unreported or unidentified leaks or spills at these sites could have resulted in unknown soil or groundwater contamination, which could have migrated to the alignment and could be encountered during grading for access roads or excavation for tower footings, a significant impact. Although unanticipated contamination along the other portions of the Santa Ysabel Existing ROW Alternative is unlikely due to the primarily undeveloped and rural nature of the surrounding areas, there is potential for unknown contamination to have occurred along and near the area roads due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater

could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II)

The environmental database review (EDR, 2007e) indicates that one site with known contamination is listed approximately 650 feet east of the Santa Ysabel Existing ROW Alternative, at 30351 Highway 79. Although this site has been remediated and is undergoing post-remediation monitoring, the presence of this site adjacent to the alignment results in a slight potential for contaminated soil and/or groundwater to have migrated to the project ROW and thus to be encountered during construction, a significant impact. SDG&E will implement APMs HS-APM-5 and HS-APM-10 to reduce impacts from known contaminated sites. HS-APM-5 requires that SDG&E investigate all Government Code §65962.5 sites that along the project ROW that could potentially impact the project. HS-APM-10 requires that all hazardous waste be stored and disposed of in accordance with federal, State, and local requirements.

Nevertheless, environmental impacts would still be significant if contaminated sites near the project ROW were not adequately characterized and contamination from these areas has migrated to the soil or groundwater within the project ROW. In order to reduce potential health hazards related to exposure of construction personnel and/or the public to hazardous materials in the soil, groundwater, or surface water to less than significant, SDG&E will implement Mitigation Measure P-7a (Evaluate contaminated sites). This four step mitigation measure will reduce environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-7a Evaluate contaminated sites.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission lines, towers, and other associated transmission components for the Santa Ysabel Existing ROW Alternative. This could result in exposure of the maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be

trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.16.2 Santa Ysabel Partial Underground Alternative

This 230 kV alternative would begin at MP 105.5 where the proposed route would join Mesa Grande Road at the base of the hills at the western side of the Santa Ysabel Valley. The alternative would transition underground at the southern side of Mesa Grande Road and would travel underground in Mesa Grande Road, SR79 and then, south of SR78, following property lines for approximately one mile to rejoin the proposed route at approximately MP 109.5 where it would transition overhead. The route would be 0.7 miles longer than the proposed route.

Environmental Setting

The Santa Ysabel Partial Underground Alternative is an underground alignment transitioning from and to overhead at either end. It traverses along and within roads and across a small amount of undeveloped grass land. The alignment passes scattered rural residences and ranches located along Mesa Grande Road and SR79, passes through the town of Santa Ysabel along SR79 and SR78, and along the eastern

edge of town along unpaved access roads. The terrain consists of a mix of moderate to gently sloping hills on the northern end and flat to gently sloping alluvial fans and valley floor for most of the alignment, with grasslands and scattered scrub vegetation along the entire alignment.

Based on review of the EDR database search (EDR, 2006a and 2007e), there are two hazardous material sites within 0.25 miles of the Santa Ysabel Partial Underground Alternative route with potential to impact the project. These sites are summarized below in Table D.10-18.

Table D.10-18. Identified Hazardous Material Sites within 0.25 Miles of the Santa Ysabel Partial Underground Alternative

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
1	Santa Ysabel Service	30350 Highway 78, Santa Ysabel	LUST, Cortese	Leaking gasoline UST with groundwater affected. Leak discovered during tank closure. Site is currently undergoing post remediation monitoring.
2	Santa Ysabel Fuel Stop/ D & M Service	30351 Highway 78, Santa Ysabel	HAZNET, SD Co. HMMD	Three active fuel USTs listed; one diesel and two gasoline. Generates small amounts of hazardous waste consisting of waste oil, used oil filters, and other misc. organic and non-organic liquids.

Source: EDR, 2007e.

1 EDR Environmental Information Data Site I.D. Number.

2 See Appendix 13 for Detailed Description of Regulatory Agency Listings.

STATE AND LOCAL DATABASES

LUST: Leaking Underground Storage Tank Incident Reports, contains an inventory of reported leaking underground storage tank incidents.

CORTESE: "Cortese" Hazardous Waste & Substances Sites List.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

Environment Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered) and P-4 (encountering unexploded ordnance) would not occur along the Santa Ysabel Partial Underground Alternative and are therefore not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the Santa Ysabel Partial Underground Alternative, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste)

would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Two hazardous material sites are located along the Santa Ysabel Partial Underground Alternative alignment in the town of Santa Ysabel adjacent to the alignment along SR78, at approximately milepost SYPU-3.1. Unreported or unidentified leaks or spills at these sites could have resulted in unknown soil or groundwater contamination which could have migrated to the alignment and could be encountered during excavation for trenches and vaults, a significant impact. Although unanticipated contamination along the other portions of the Santa Ysabel Partial Underground Alternative is unlikely due to the primarily undeveloped and rural nature of the surrounding areas, there is an additional potential for unknown contamination to have occurred along and near the area roads due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II)

The environmental database review indicates that one site with known contamination (undergoing post remediation monitoring) is listed adjacent to the Santa Ysabel Partial Underground Alternative, at 30351 Highway 79. The presence of this site adjacent to the alignment results in a slight potential for contaminated soil or groundwater have migrated to the project ROW and thus be encountered during construction, a significant impact. SDG&E will implement APMs HS-APM-5 and HS-APM-10 to reduce impacts from known contaminated sites. HS-APM-5 requires that SDG&E investigate all Government Code §65962.5 sites that along the project ROW that could potentially impact the project. HS-APM-10 requires that all hazardous waste be stored and disposed of in accordance with federal, State, and local requirements.

Nevertheless, environmental impacts would still be significant if contaminated sites near the project ROW were not adequately characterized and contamination from these areas has migrated to the soil or groundwater within the project ROW. In order to reduce potential health hazards related to exposure of construction personnel and/or the public to hazardous materials in the soil, groundwater, or surface water to less than significant, SDG&E will implement Mitigation Measure P-7a (Evaluate contaminated sites). This four step mitigation measure will reduce environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-7a Evaluate contaminated sites.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission lines, transition towers, and other associated transmission components for the Santa Ysabel Partial Underground Alternative. This could result in exposure of the maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table

D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.16.3 Santa Ysabel SR79 All Underground Alternative

This alternative would diverge from the Proposed Project at MP 100, just south of the crossing of SR78. It would start as an overhead 230 kV line, which would then transition to an underground route on private property, west of SR79. It would be underground along existing dirt roads and within hay fields and SR79 through the Santa Ysabel Valley, rejoining the proposed route south of SR78.

Environmental Setting

The Santa Ysabel SR79 All Underground Alternative is an underground alignment that would traverse through the upper Santa Ysabel Valley near Carrista Creek. The alignment crosses through rural ranch land consisting primarily of pastures and open space. The terrain consists of a mix of gently sloping hills and flat to gently sloping alluvial fans and valley floor with grasslands and scattered scrub vegetation.

Based on review of the EDR database search (EDR, 2006a and 2007e), there are no hazardous material sites within 0.25 miles of the Santa Ysabel SR79 All Underground Alternative.

Environment Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered), P-4 (Encountering unexploded ordnance), and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the Santa Ysabel Existing ROW Alternative and therefore are not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the Santa Ysabel SR79 All Underground Alternative, resulting in a potential for soil contami-

nation from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Although unanticipated contamination along the Santa Ysabel SR79 All Underground Alternative is unlikely due to the primarily rural nature of the surrounding areas, there is a potential for unknown contamination to have occurred along and near area roads due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission lines, towers, and other associated transmission components for the Santa Ysabel SR79 All Underground Alternative. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.16.4 SDG&E Mesa Grande Alternative

This alternative to a one-mile portion of the proposed overhead 230 kV route was proposed by the landowner and also by SDG&E in order to reduce the visibility of the overhead line west of Mesa Grande Road. It would diverge from the proposed route at MP 102.2, and rejoin it before MP 104.

Environmental Setting

The SDG&E Mesa Grande Alternative is a 1.0-mile overhead alignment that traverses gently sloping hills with grasslands and scattered scrub vegetation. Based on review of the EDR database search (EDR, 2006a and 2007e), there are no hazardous material sites within 0.25 miles of the SDG&E Mesa Grande Alternative.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered), P-4 (encountering unexploded ordnance), and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the SDG&E Mesa Grande Alternative and therefore are not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the SDG&E Mesa Grande Alternative, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Although unanticipated contamination along the SDG&E Mesa Grande Alternative is unlikely due to the undeveloped and rural nature of the surrounding areas, there is a potential for unknown contamination to have occurred along and near Mesa Grande Road due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate

agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**

P-3b **Documentation of compliance with measures for encountering unknown contamination.**

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission lines, towers, and other associated transmission components for the SDG&E Mesa Grande Alternative. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the

chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.17 Inland Valley Link Alternatives Impacts and Mitigation Measures

Four alternatives are considered within the Inland Valley Link: the CNF Existing 69 kV Route Alternative, the Oak Hollow Road Underground Alternative, the San Vicente Road Transition Station Alternative, and the Chuck Wagon Road Alternative.

An EDR database search (EDR, 2006a) provided by the applicant for a one-mile-wide corridor (one-half mile on both sides) along portions of the Inland Valley Link alternative alignments and a new EDR database search (EDR, 2007a) for a one-half mile wide corridor (one-quarter miles on both sides) for new and changed alternative alignments were reviewed and analyzed for sites within 0.25 miles of the alternative routes with known environmental contamination or that store, use, and dispose of significant quantities of hazardous materials. Such sites have the potential to have created environmental contamination within the alternative ROWs.

D.10.17.1 CNF Existing 69 kV Route Alternative

This 0.5-mile alternative segment would start at MP 111.3 where the proposed 230 kV and existing 69 kV transmission lines would be routed west for 0.5 miles and then south for approximately 0.5 miles to avoid Cleveland National Forest (CNF). The alternative would remain in the existing 69 kV ROW heading southwest through Cleveland National Forest to rejoin the proposed route at MP 111.8. This alternative would be 0.5 miles shorter than the Proposed Project and the existing 69 kV transmission line would not need to be relocated out of the existing ROW.

Environmental Setting

The CNF Existing 69 kV Route Alternative is an overhead alignment that traverses along moderately sloping hills dissected by arroyos and small drainages and crosses the upper end of Collier Flat. The area is open ranch land covered by scattered scrub and grasslands vegetation.

Based on review of the EDR database search (EDR, 2006a), there are no hazardous material sites within 0.25 miles of the CNF Existing 69 kV Route Alternative.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impact P-2 (Residual pesticides and/or herbicides could be encountered), Impact P-4 (encountering unexploded ordnance), Impact P-3 (Unanticipated preexisting soil and/or groundwater contamination could be encountered), and Impact P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the CNF Existing 69 kV Route Alternative alignment and therefore are not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the CNF Existing 69 kV Route Alternative, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission lines, towers, and other associated transmission components for the CNF Existing 69 kV Route Alternative. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to

hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.17.2 Oak Hollow Road Underground Alternative

The purpose of this alternative would be to extend the proposed underground to the east of Mount Gower County Open Space Preserve so the line would be underground through the valley area. The alternative would require 0.6 miles of additional underground 230 kV transmission line, and the existing 69 kV would remain overhead.

Environmental Setting

The Oak Hollow Road Underground Alternative is an approximately 0.6-mile underground alignment that traverses within gently sloping roads along the northern edge of Swartz Canyon. The alignment passes through undeveloped hillside terrain with scattered scrub and grass vegetation.

Based on review of the EDR database search (EDR, 2006a), there are no hazardous material sites within 0.25 miles of the Oak Hollow Road Underground Alternative.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered), P-4 (encountering unexploded ordnance), and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the Oak Hollow Road Underground Alternative alignment and therefore are not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the Oak Hollow Road Underground Alternative, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Although unanticipated contamination along the Oak Hollow Road Underground Alternative is unlikely due to the undeveloped area the alignment passes through, there is a potential for unknown contamination to have occurred along and near Oak Hollow and Gunn Stage Roads due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially con-

taminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a **Appoint individuals with correct training for sampling, data review, and regulatory coordination.**

P-3b **Documentation of compliance with measures for encountering unknown contamination.**

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission lines and other associated transmission components for the Oak Hollow Road Underground Alternative. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust

to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.17.3 San Vicente Road Transition Alternative

The alternative would move the transition structure from its proposed location along San Vicente Road (MP 121.9) approximately 0.3 miles west to MP 122.2. The underground line would follow San Vicente Road within a 60-foot ROW for an additional 2,100 feet and would cross under an existing Creelman–Los Coches 69 kV transmission line, before it would turn north and would travel through open space for approximately 200 feet to the overhead transition point.

Environmental Setting

The San Vicente Road Transition Alternative is an underground and overhead alignment that traverses within gently sloping roads and hills. The surrounding area is sparsely populated with rural residences and the alignment passes through undeveloped hillside terrain with scattered scrub and grass vegetation.

Based on review of the EDR database search (EDR, 2006a), there are no hazardous material sites within 0.25 miles of the San Vicente Road Transition Alternative.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered), P-4 (encountering unexploded ordnance), and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the San Vicente Road Transition Alternative alignment and therefore are not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the San Vicente Road Transition Alternative, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Although unanticipated contamination along the San Vicente Road Transition Alternative is unlikely due to the undeveloped area the alignment passes through, there is a potential for unknown contamination to have occurred along and near San Vicente Road due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In, addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the tower structures, transmission lines, and other associated transmission components for the San Vicente Road Transition Alternative. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to

hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.17.4 Chuck Wagon Road Alternative

This alternative would diverge from the proposed route in San Vicente Boulevard, turning south in Chuck Wagon Road approximately 0.2 miles east of the proposed transition point at MP 121.7. It would continue south for approximately 1.6 miles before passing under the existing Creelman-Los Coches 69 kV transmission line ROW. At this point, the route would transition to overhead and turn west for approximately 1.2 miles to rejoin the proposed route at MP 125.6.

Environmental Setting

The Chuck Wagon Road Alternative is 3.1 miles long with both underground and overhead transmission line. The underground portion runs within gently sloping Chuck Wagon Road, which traverses primarily gently to moderately sloping hilly and rocky terrain with sparse brush and grassy vegetation. The overhead portion of the alternative traverses gently to moderately sloping hilly and rocky terrain and crosses Daney Canyon near its western end, from approximately mileposts CWR 2.7 to 2.9. The overhead portion of the alignment crosses undeveloped land with sparse vegetation.

Based on review of the EDR database search (EDR, 2007a), there are no hazardous material sites within 0.25 miles of the Chuck Wagon Road Alternative of the Proposed Project with potential to impact the project.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered), P-4 (encountering unexploded ordnance), and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the Chuck Wagon Road Alternative alignment and therefore are not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the Chuck Wagon Road Alternative, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Although unanticipated contamination along the Chuck Wagon Road Alternative is unlikely due to the undeveloped area the alignment passes through, there is a potential for unknown contamination to have occurred along and near Chuck Wagon Road due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to

ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the tower structures, transmission lines, and other associated transmission components for the Chuck Wagon Road Alternative. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

SDG&E applies herbicide, in conjunction with mechanical clearing of vegetation, to prevent or remove vegetation in the right-of-way. Herbicide is applied to bare soil to prevent emergence of new growth and to emergent plant material. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). This herbicide application during operation and maintenance of the Proposed Project could potentially impact the workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. However, all of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust

to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.18 Coastal Link Alternatives Impacts and Mitigation Measures

Four alternatives are considered within the Coastal Link: the Pomerado Road to Miramar Area North Alternative, the Los Peñasquitos Canyon Preserve and Mercy Road Alternative, the Black Mountain to Park Village Road Underground Alternative, and the Coastal Link System Upgrade Alternative.

An EDR database search (EDR, 2006a) provided by the applicant for a one-mile-wide corridor (one-half mile on both sides) along portions of the Coastal Link alternative alignments and new EDR database search (EDR, 2007c and 2007d) for a one-half mile wide corridor (one-quarter mile on both sides) for new and changed alternative alignments were reviewed and analyzed for sites within 0.25 miles of the alternative routes with known environmental contamination and sites that store, use, and dispose of significant quantities of hazardous materials which have the potential to have resulted in environmental contamination within the alternative ROWs.

D.10.18.1 Pomerado Road to Miramar Area North

This alternative would be underground with the exception of the east and west ends where the line is overhead within existing SDG&E transmission ROWs. This alternative would exit the Sycamore Substation at MCAS Miramar overhead westerly within an existing ROW toward Pomerado Road. The line would transition to underground beneath Pomerado Road in the vicinity of Legacy Road, then continuing underground in Miramar Road, Kearny Villa Road, Black Mountain Road, Activity Road, Camino Ruiz, Miralani Drive, Arjons Drive, Trade Place, Camino Santa Fe, Carroll Road/Carroll Canyon Road and Scranton Road. At the western end, the line would transition to overhead and would be located within the existing 230 kV ROW heading northward into the Peñasquitos Substation.

Environmental Setting

The Pomerado Road to Miramar Area North Alternative traverses primarily residential and educational properties east of I-15 and industrial and light industrial properties west of I-15. Along Pomerado Road the alternative traverses in the roadway through primarily developed hillside terrain with residential developments on both sides of the road. There is a small amount of undeveloped hillside land with scrub brush along the edges of Carroll Canyon. Several educational institutions and educational facilities are located south of the alternative alignment between mileposts PM-2.5 and PM-4, including Alliant International University, Chabad Hebrew Academy, and University of California San Diego (UCSD) agricultural facilities. The northern edge of the MCAS Miramar is located south of Pomerado Road, on the southern side of intervening residential developments, educational properties, and some undeveloped hillside. The alignment runs adjacent to the northern MCAS Miramar boundary between approximately mileposts PM 4 to 4.6, before the alignment jogs north onto a series of smaller streets that run through primarily industrial properties.

West of the I-15 the remainder of the underground alignment traverses within a series of roads along Carroll Canyon through a primarily industrial area with scattered commercial properties. Industrial

properties along this portion of the Pomerado Road to Miramar Area North Alternative include large manufacturing plants, pharmaceutical manufacturing and development, large shipping and warehouse facilities, and numerous other manufacturing and product development businesses. Commercial properties scattered among the industrial buildings consist primarily of gas stations, dry cleaners, and food service businesses. The alignment transitions to overhead near approximately milepost PM-10.7 at the intersection of Carroll Canyon and Scranton Roads and continues overhead across Peñasquitos Canyon to the Peñasquitos Substation. The overhead portion of the Pomerado Road to Miramar Area North Alternative traverses north along an existing transmission ROW. South of Peñasquitos Canyon the alignment crosses over and past several large industrial complexes with intervening open space. These industrial complexes are primarily pharmaceutical and biotechnology laboratories and manufacturers. North of Peñasquitos Canyon the alternative alignment traverses up undeveloped hillside with scattered brush and past a new residential development before entering the Peñasquitos Substation.

Review of the EDR database search for the Pomerado Road to Miramar Area North Alternative (EDR, 2007d) indicates that west of the I-15 there are numerous hazardous material sites within 0.25 miles of the alignment with potential to impact the project. Sites with underground storage tanks and leaking underground storage tanks with potential to impact the Pomerado Road to Miramar Area North Alternative alignment are summarized in Table D.10-12. More than 500 listings for sites that store, use, and dispose of hazardous materials were also identified in the database for the Pomerado Road to Miramar Area North Alternative, primarily between the I-15 and Peñasquitos Canyon; these sites are not listed in Table D.10-19 due to the extremely large number of sites. These sites include numerous transportation, manufacturing, and laboratory facilities which store, use, and dispose of many different types of chemicals (see Appendix 13).

Table D.10-19. Identified UST and LUST Sites with Potential to Impact the Pomerado Road to Miramar Area North Alternative

EDR Map ID	Site Name	Site Address	Database Lists ²	Comments
13	Sunflower Property/Goss-Jewitt & Co./JPM, Inc.	9755 Distribution Ave., San Diego	LUST, CALSITES, RCRA-SQ, FINDS, HAZNET, RESPONSE, ENVIROSTOR	Leaking fuel tank requiring soil vapor cleanup and groundwater investigation.
13	Scripps/Miramar Car Wash Chevron	9650 Miramar Road, San Diego	LUST, UST, FINDS, SD Co. HMMD, HIST UST, SWEEPS UST, SD Co. SAM	Leaking fuel tank impacting soil and groundwater; soil case closed, active groundwater monitoring. Four UST fuel tanks listed.
13	Rollins Leasing Corporation	8750 Production Ave., San Diego	UST, SWEEPS UST	Two fuel USTs and one waste oil UST listed.
13	Mesa Distributing Co.	8870 Liquid Court, San Diego	UST, HAZNET, SWEEPS UST, SD Co. HMMD	Two fuel USTs listed.
13	Pacific Bell	7337 Trade Street, San Diego	LUST, UST, SWEEPS UST, SD Co. HMMD	Leaking tank is case closed. Four fuel USTs listed.
13	Crest Beverage Co./Mesa Distributing Co., Inc.	7598 Trade Street, San Diego	LUST, UST, HAZNET, SD Co. HMMD, SD SAM	Leaking fuel tank is case closed. Eight fuel USTs listed.
13	California Commercial Asphalt	9235 Camino Santa Fe, San Diego	UST, SD Co. HMMD, FINDS	One fuel UST listed.

Table D.10-19. Identified UST and LUST Sites with Potential to Impact the Pomerado Road to Miramar Area North Alternative

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
13	Superior Ready Mix – Carroll Canyon Plant	9245 Camino Santa Fe, San Diego	LUST, UST, SWEEPS UST, CORTESE, HAZNET, FINDS, SD Co. HMMMD	Leaking UST is case closed. One diesel UST is listed.
13	Hanson Aggregates	9245/9255 Camino Santa Fe, San Diego	LUST, UST, RCRA-LQG, FINDS, SD Co. HMMMD, SD Co. SAM	Leaking UST is case closed. Five fuel USTs listed.
13	Arco # 9761/Best California Gas	9393 Kearny Mesa Road, San Diego	LUST, UST	Leaking UST is case closed. Nine fuel USTs listed.
13	Miramar Shell	9840 Miramar Road, San Diego	LUST, UST, HIST UST, SD Co. HMMMD, SD Co. SAM	Leaking UST is case closed. Eight fuel USTs listed.
13	Mayflower/San Diego Van & Storage	9320 Miramar Road, San Diego, CA	LUST, UST, CORTESE, HAZNET, SD Co. HMMMD	Leaking UST is case closed. Two fuel USTs listed.
13	Miramar Texaco/Exxon	9799 Miramar Road, San Diego	LUST, UST, CORTESE, HIST UST, SD Co. HMMMD, SD Co. SAM	Leaking UST is case closed. Seven USTs listed.
13	Mobil Service Station #18-E71	9790 Miramar Road, San Diego	LUST, UST, CORTESE, HAZNET	Leaking UST is case closed. Seven fuel USTs and one waste oil UST listed.
13	Western Insulation	8305/8315 Miralani Dr., San Diego, Ca	LUST, UST, CORTESE, SWEEPS UST, SD Co. SAM	Leaking UST is case closed. Two fuel USTs listed.
13	August European Inc.	9705 Candida Street, San Diego	UST, HAZNET, SD Co. HMMMD, SWEEPS UST	One UST listed.
13	Prestige Stations/Quality Lube/Arco Facility #05830	9720 Carroll Centre Road, San Diego	LUST, UST, SD Co. HMMMD, SD Co. SAM, FINDS, HAZNET	Leaking UST is case closed. Four USTs listed.
13	Rush Truck Leasing	9690 Black Mountain road, San Diego	UST, RCRA-SQ, FINDS, HAZNET, SD Co. HMMMD	Two fuel USTs listed.
13	Smiser Trucking	9310 Activity Road, San Diego	LUST, UST	Leaking UST is case closed. USTs identified from Geotracker ³ , quantity unknown.
17	San Diego City Fire Station #41	4914 Carroll Canyon Road, San Diego	UST, SD Co. HMMMD, SWEEPS UST, HAZNET	One diesel UST listed.
17	Americana Car Wash	9510 Scranton Road, San Diego	UST, SWEEPS UST, HAZNET, SD Co. HMMMD	Four fuel USTs listed.

Sources: EDR, 2007d.

1 EDR Environmental Information Data Site I.D. Number.

2 See Appendix 13 for Detailed Description of Regulatory Agency Listings.

FEDERAL DATABASES

RCRA-SQG: Resource Conservation and Recovery Act Information, Small Quantity Generator

RCRA-LQG: Resource Conservation and Recovery Act Information, Large Quantity Generator

FINDS: Facility Index System/Facility Registry System, contains both facility information and 'pointers' to other sources that contain more detail.

STATE AND LOCAL DATABASES

CALSITES: Calsites Database contains potential or confirmed hazardous substance release properties. Not updated since 1996, has been replaced by ENVIROSTOR.

RESPONSE: State Response Sites where DTSC is involved in remediation.

ENVIRONSTOR: EnviroStor Database—DTSC’s database that identifies sites that have known contamination or sites for which there may be reasons to investigate further.

HIST UST: Hazardous Substance Storage Container Database, a historical listing of UST sites.

SWEEPS UST: Statewide Environmental Evaluation and Planning System, listing of USTs from 1980s.

LUST: Leaking Underground Storage Tank Incident Reports, contains an inventory of reported leaking underground storage tank incidents.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

SD Co. SAM: Contains listing of all underground tank release cases and projects actively under review by the Site Assessment and Mitigation Program.

UST: Active UST Facilities, Active UST facilities gathered from the local regulatory agencies

CORTESE: “Cortese” Hazardous Waste & Substances Sites List.

3 RWQCB GeoTracker –GeoTracker is a geographic information system (GIS) that provides online access to environmental data warehouse which tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered) and P-4 (encountering unexploded ordnance) would not occur along the Pomerado Road to Miramar Area North Alternative and are therefore not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the Pomerado Road to Miramar Area North Alternative, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E’s APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E’s and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

More than 500 hazardous material sites are located along the portion of the Pomerado Road to Miramar Area North Alternative alignment between I-15 and Peñasquitos Canyon (EDR, 2007d). These include sites that use, store and dispose of hazardous materials, sites with USTs, and sites that have had past known contamination which are now “case closed.” The very large number of hazardous material sites near to and adjacent to the alignment leads to a substantial potential to encounter unknown contamination in the soil or groundwater during excavation for the project. Unreported or unidentified leaks or spills at these sites could have resulted in unknown soil or groundwater contamination that could have migrated to the alignment and could be encountered during excavation for trenches and vaults, a significant impact. Although unanticipated contamination along the other portions of the Pomerado Road to Miramar Area North Alternative is unlikely due to the primarily residential nature of the surrounding areas, there is an additional potential for unknown contamination to have occurred along and near the area roads due to illegal dumping.

SDG&E’s APMs HS-APM-15,-16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II)

The environmental database review (EDR, 2007d) indicates that two sites with current known contamination (both undergoing remediation and monitoring) are listed adjacent to the Pomerado Road to Miramar Area North Alternative alignment. These are the Sunflower Property/Goss-Jewitt & Co./JPM, Inc. site at 9755 Distribution Avenue and the Scripps/Miramar Car Wash Chevron at 9650 Miramar Road. The presence of these two known contaminated sites adjacent to the alignment and the presence of over 500 hazardous material sites listed as being within 0.25-miles of the alignment creates a significant potential for contaminated soil and/or groundwater to have migrated to the project ROW and thus be encountered during trench excavation, a significant impact. SDG&E will implement APMs HS-APM-5

and HS-APM-10 to reduce impacts from known contaminated sites. HS-APM-5 requires that SDG&E investigate all Government Code §65962.5 sites that along the project ROW that could potentially impact the project. HS-APM-10 requires that all hazardous waste be stored and disposed of in accordance with federal, State, and local requirements.

Nevertheless, environmental impacts would still be significant if contaminated sites near the project ROW were not adequately characterized and contamination from these areas has migrated to the soil or groundwater within the project ROW. In order to reduce potential health hazards related to exposure of construction personnel and/or the public to hazardous materials in the soil, groundwater, or surface water to less than significant, SDG&E will implement Mitigation Measure P-7a (Evaluate contaminated sites). This four step mitigation measure will reduce environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-7a Evaluate contaminated sites.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission lines, transition towers, and other associated transmission components for the Pomerado Road to Miramar Area North Alternative. This could result in exposure of the maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

Herbicide used for vegetation control around the towers along the overhead portions of the Pomerado Road to Miramar Area North Alternative during operation and maintenance of the transmission line could potentially impact the health of workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). The potential exposure of workers

applying the herbicide would also be minimized by following the manufacturer’s recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, considering the generally low toxicity of these herbicides, their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.18.2 Los Peñasquitos Canyon Preserve–Mercy Road Alternative

This alternative route would bypass the Chicarita Substation and connect to existing ROW along Scripps Poway Parkway in the vicinity of Ivy Hill Drive. The line would then transition to underground and follow Scripps Poway Parkway/Mercy Road, Mercy Road, Black Mountain Road, and finally Park Village Drive, where the alternative route would rejoin the proposed route.

Environmental Setting

The underground portion of the Los Peñasquitos Canyon Preserve–Mercy Road Alternative alignment along Scripps Poway Parkway passes through new residential, commercial, and light industrial developments. After crossing I-15 the alignment would continue underground along Mercy Road, passing through residential neighborhoods with scattered commercial properties. Along Black Mountain road the alignment would continue underground through Los Peñasquitos Canyon Preserve, Canyonside Community Park, and residential neighborhoods. As the alignment turns to the west along Park Village Drive it continues through residential neighborhoods.

Based on review of the EDR database search (EDR, 2007c), there are five hazardous material sites within 0.25 miles of the Los Peñasquitos Canyon Preserve–Mercy Road Alternative with potential to impact the project, consisting primarily of gas stations. These sites are summarized in Table D.10-20.

Table D.10-20. Identified Hazardous Material Sites within 0.25 Miles of the Los Peñasquitos Canyon Preserve–Mercy Road Alternative

EDR Map ID ¹	Site Name	Site Address	Database Lists ²	Comments
7	EXXONMOBILE Oil Corp No. 17970	10555 Scripps Poway Pkwy, San Diego	UST, HAZNET, RCRA-LOG, FINDS, SD Co. HMMD	Gasoline and Diesel stored in underground storage tanks.
7, 13	USA Gasoline Corp Facility No 0851	12010 Scripps Highland Drive, San Diego	RCRA-SQG, HAZNET, FINDS	Listed as a small quantity generator. Site is an active gas station with three USTs listed.
7	Scripps Energy LLC/KA Management Inc DBA Scripps	12033 Scripps Summit Dr., San Diego	HAZNET, SD Co. HMMD	Site listed as having 3 USTs; 2 gasoline and 1 diesel. Site currently occupied by ARCO gas station.
8	Canyonside Stables, City of San Diego	12115 Black Mountain Rd, San Diego	LUST, CORTESE, SD Co. SAM	Gasoline leak. Release date 1999. Drinking water aquifer affected. MTBE contamination detected. Site undergoing preliminary site assessment.
9, 10	Chevron Station	9936 Mercy Road, San Diego	RCRA-SQG, HAZNET, FINDS, SD Co. HMMD	Site listed as having to gasoline USTs.

Sources: EDR, 2007c.

1 EDR Environmental Information Data Site I.D. Number.

2 See Appendix 13 for Detailed Description of Regulatory Agency Listings.

FEDERAL DATABASES

RCRA-SQG: Resource Conservation and Recovery Act Information, Small Quantity Generator

RCRA-LQG: Resource Conservation and Recovery Act Information, Large Quantity Generator

FINDS: Facility Index System/Facility Registry System, contains both facility information and 'pointers' to other sources that contain more detail.

STATE AND LOCAL DATABASES

HIST UST: Hazardous Substance Storage Container Database, a historical listing of UST sites.

SWEEPS UST: Statewide Environmental Evaluation and Planning System, listing of USTs from 1980s.

LUST: Leaking Underground Storage Tank Incident Reports, contains an inventory of reported leaking underground storage tank incidents.

HAZNET: Facility and Manifest Data, data is extracted from the copies of hazardous waste manifests received each year by the DTSC.

SD Co. HMMD: San Diego County Hazardous Materials Management Division Database

SD Co. SAM: Contains listing of all underground tank release cases and projects actively under review by the Site Assessment and Mitigation Program.

UST: Active UST Facilities, Active UST facilities gathered from the local regulatory agencies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered) and P-4 (encountering unexploded ordnance) would not occur along the Los Peñasquitos Canyon Preserve–Mercy Road Alternative and are therefore not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the Los Peñasquitos Canyon Preserve–Mercy Road Alternative, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Five hazardous material sites are located along the Los Peñasquitos Canyon–Mercy Road Alternative alignment, four active gas station sites and a stable with a LUST (EDR, 2007c). Unreported or unidentified leaks or spills at these sites could have resulted in unknown soil or groundwater contamination that could have migrated to the alignment and could be encountered during excavation for trench and vaults, a significant impact. Although unanticipated contamination along the other portions of the Los Peñasquitos Canyon Preserve–Mercy Road Alternative is unlikely due to the primarily residential nature of the surrounding areas, there is an additional potential for unknown contamination to have occurred along and near the area roads due to illegal dumping. SDG&E’s APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified by visual staining or odor, suspected areas of contamination cordoned off and appropriate health and safety measures taken, conducting sampling and testing of suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition, no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites (Class II)

The environmental database review (EDR, 2007c) indicates that one site with known contamination (undergoing preliminary site assessment) is listed adjacent to the Los Peñasquitos Canyon Preserve–Mercy Road Alternative. This is the Canyonside Stables at 12115 Black Mountain Road. The presence of this contaminated site adjacent to the alignment results in a significant potential for contaminated soil and/or groundwater to have migrated to the project ROW and thus be encountered during construction, a significant impact. SDG&E will implement APMs HS-APM-5 and HS-APM-10 to reduce impacts from known contaminated sites. HS-APM-5 requires that SDG&E investigate all Government Code §65962.5 sites that along the project ROW that could potentially impact the project. HS-APM-10 requires that all hazardous waste be stored and disposed of in accordance with federal, State, and local requirements.

Nevertheless, environmental impacts would still be significant if contaminated sites near the project ROW were not adequately characterized and contamination from these areas has migrated to the soil or groundwater within the project ROW. In order to reduce potential health hazards related to exposure of construction personnel

and/or the public to hazardous materials in the soil, groundwater, or surface water to less than significant, SDG&E will implement Mitigation Measure P-7a (Evaluate contaminated sites). This four step mitigation measure will reduce environmental impacts to less than significant (Class II).

Mitigation Measure for Impact P-7: Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites

P-7a Evaluate contaminated sites.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission lines, transition towers, and other associated transmission components for the Los Peñasquitos Canyon Preserve–Mercy Road Alternative. This could result in exposure of the maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surface contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

Herbicide used for vegetation control around towers along the overhead portions (either end) of the Los Peñasquitos Canyon Preserve–Mercy Road Alternative during operation and maintenance of the transmission line could potentially impact the health of workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. SDG&E and their contractor's follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns which is summarized in Table D.10-8. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All of these herbicides are classified by U.S.EPA as Low Toxicity (Class III). All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, with use of SDG&E's application protocols, and considering the generally low toxicity of these herbicides (see Table D.10-9), their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide

in soil and airborne dust does not pose a significant adverse health risk. This is an adverse but less than significant impact (Class III).

D.10.18.3 Black Mountain to Park Village Road Underground Alternative

This alternative would deviate from the Proposed Project alignment where the route approaches Black Mountain Road. Under this alternative, the line would remain underground but would be located underneath Black Mountain Road and would turn west onto Park Village Drive, following the project alignment into the Peñasquitos Substation via the Los Peñasquitos Canyon Preserve.

Environmental Setting

This alternative is entirely underground in existing roadways, traversing along Black Mountain and Park Village Roads through residential neighborhoods.

Based on review of the EDR database search (EDR, 2006a), there are no hazardous material sites within 0.25 miles of the Black Mountain to Park Village Road Underground Alternative.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered), P-4 (encountering unexploded ordnance), and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the Black Mountain to Park Village Road Underground Alternative alignment and therefore are not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the Black Mountain to Park Village Road Underground Alternative, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading (Class II)

Although unanticipated contamination along the Black Mountain to Park Village Road Underground Alternative is unlikely due to the residential nature of the area the alignment passes through, there is a potential for unknown contamination to have occurred along and near both roads due to illegal dumping. SDG&E's APMs HS-APM-15, -16, and -17 would be incorporated into the project in order to reduce the significance of this impact by stopping work if suspected contamination is identified by visual staining or odor, suspected areas of contamination would be cordoned off and appropriate health and safety measures taken, sampling and testing conducted for suspected material, and if contamination is found to be greater than regulatory limits the appropriate agency (RWQCB and/or CUPA) shall be notified. However, these measures do not specify how or who will determine if regulatory limits are exceeded, and if laboratory data is not properly interpreted environmentally contaminated soil or groundwater could be improperly handled and disposed of resulting in additional environmental contamination or exposure of workers to contaminated materials, a significant impact. In addition no requirements for documentation of these incidents are included, including reporting locations of, sampling results, and actions taken for potentially contaminated sites to the CPUC and BLM (if on BLM lands). Therefore Mitigation Measures P-3a and P-3b are required to ensure that laboratory data is properly interpreted by trained personnel regarding contamination levels for reporting to the appropriate regulatory agency and documentation that these measures are properly implemented, reducing the impact from encountering unknown contamination to less than significant (Class II).

Mitigation Measure for Impact P-3: Unanticipated preexisting soil and/or groundwater contamination could be encountered during excavation or grading

P-3a Appoint individuals with correct training for sampling, data review, and regulatory coordination.

P-3b Documentation of compliance with measures for encountering unknown contamination.

Operational Impacts

No impacts from Impact P-6 (Herbicides used for vegetation control could result in adverse health effects) are expected as this alternative is entirely underground and is therefore not discussed in this section.

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the transmission lines and other associated transmission components for the Black Mountain to Park Village Road Underground Alternative. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be devel-

oped (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

D.10.18.4 Coastal Link System Upgrade Alternative

The Coastal Link System Upgrade Alternative would be a system modification to install a third 230/69 kV transformer at the existing Sycamore Canyon Substation. Expansion of the Sycamore Canyon Substation would occur within the existing substation easement. Additionally, SDG&E would either (a) install a new 230/138 kV transformer at the existing Encina Substation or (b) upgrade (reconductor) the existing Sycamore Canyon-Chicarita 138 kV circuit using 34 existing wood frame structures.

Environmental Setting

The Coastal Link System Upgrade Alternative would be a system modification to install a third 230/69 kV transformer at the existing Sycamore Canyon Substation. Expansion of the Sycamore Canyon Substation would occur within the existing easement of the substation. To complete Coastal Link System Upgrade Alternative, SDG&E would provide overload mitigation by upgrading three circuits: a.) reconductor the existing Sycamore Canyon-Pomerado 69 kV circuit on existing structures; b.) reconductor the existing Pomerado-Poway 69 kV circuit on existing structures; and c.) reconductor the existing Sycamore Canyon-Chicarita 138 kV circuit using 34 existing wood frame structures. This alternative would not require ground disturbance along any of the existing transmission alignments, therefore no new environmental databases were obtained or reviewed for these alignments because without ground disturbance there are no potential impacts related to contaminated soil or groundwater.

Environmental Setting

The Sycamore Canyon Substation is located at the northern edge Marine Corps Air Station Miramar. The existing Sycamore Canyon to Chicarita 69 kV alignment traverses ridge and valley areas within existing ROW, passing through residential areas and minor commercial and light industrial uses near where the alignment crosses Scripps Poway Parkway. The Sycamore Canyon to Pomerado 69 kV circuit traverses open space hills and valley and crosses a small amount of light industrial area where the Pomerado Substation is located. The existing Pomerado-Poway 69 kV alignment traverses primarily residential developments and some light industrial and commercial properties.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils and paints would be used and stored during construction of substation modifications and transmission line upgrades, creating a potential for environmental contamination due to improper handling and/or storage of hazardous materials. A list of general types

of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination, a significant impact. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II).

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Impact P-4: Unexploded ordnance encountered during construction could explode and injure workers or the public (Class III)

Work conducted near the existing Sycamore Canyon and the Fanita Junction areas would be located within MCAS Miramar. The station have been used for bombing and munitions testing, creating the potential to encounter unexploded ordnance during project construction for reconductoring that could result in death of injury to workers or the public. This would be a significant impact. In order to reduce potential health hazards related to exposure to UXO, prior to the start of construction, SDG&E would perform a survey of identified FUDS database sites as well as other areas along the project transmission line ROW with historical military activities. The survey would include identification of potential UXO locations, from which a determination of what possibly would be present shall be made. After the survey is completed, the appropriate contractor shall arrange for extensive survey of identified location(s) and the removal of any UXO, if found (SDG&E, 2006). Trained experts shall be used to investigate and remove unexploded ordnance in known and potential military areas prior to the start of construction (HS-APM-6). In addition, the UXO contractor shall provide training to construction contractor's personnel involved in grading and excavation-related to the identification of UXO prior to start of work (HS-APM-7). Identification and removal of UXO prior to construction and training to recognize UXO would ensure that the impact would be less than significant (Class III).

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials during maintenance of the substations and transmission lines. This could result in exposure of maintenance workers and the public to hazardous materials; and could result in contamination to soil and/or groundwater. SDG&E would reduce these impacts with APMs that require: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance

with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Impact P-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers (Class III)

Herbicide used for vegetation control around the towers along the overhead portions of the Coastal Link System Upgrade Alternative during operation and maintenance of transmission lines could potentially impact the health of workers applying the chemical, maintenance workers in the ROW, or public that enters the affected right of way areas. The vegetation removal program uses eight different herbicides to clear all vegetation to mineral soil within a 10-foot radius around poles and structures, and their known toxicity and persistence in soil are summarized in Table D.10-9. All of these herbicides are classified by U.S.EPA as Low Toxicity (Class III).

SDG&E and their contractors' follow an Herbicide Application Protocol to prevent environmental hazards and safety and health concerns, summarized in Table D.10-8. All herbicide is applied by hand sprayer to restrict the chemical to within 10 feet of the structures (SDG&E, 2006). The potential exposure of workers applying the herbicide would also be minimized by following the manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. Maintenance workers in the ROW could be exposed to residual herbicides if the soil application was recent and excessive dust was inhaled. Public accessing the ROW may cause dust to become airborne and inhaled. However, considering the generally low toxicity of these herbicides, their restricted use at project structures, and the non-routine access of these areas by maintenance workers and the general public the presence of residual herbicide in soil and airborne dust does not pose a significant adverse health risk. This is a less than significant impact (Class III).

D.10.19 Top of the World Substation Alternative Impacts and Mitigation Measures

The substation site would be located approximately one mile west of the proposed Central East Substation on Vista Irrigation District land. The transmission line routes into the substation would follow the Proposed Project route to approximately MP 92.7, then the alternative 500 kV route would turn west for 1.1 miles to enter the alternative site. Exiting the substation, the line would travel southwest for 400 feet and then west and north-northwest to rejoin the Proposed Project around MP 95.

Environmental Setting

The Top of the World Substation Alternative is located on gently sloping hills and plateau near the northern end of the Vulcan Mountains. The area is undeveloped open space land covered by scattered scrub and grasslands vegetation.

Based on review of the EDR database search (EDR, 2006a), there are no hazardous material sites within 0.25 miles of the Top of the World Substation Alternative.

Environmental Impacts and Mitigation Measures

Construction Impacts

Impacts P-2 (Residual pesticides and/or herbicides could be encountered), P-4 (encountering unexploded ordnance), Impact P-3 (Unanticipated preexisting soil and/or groundwater contamination could be encountered), and P-7 (Excavation or grading could result in mobilization of existing soil or groundwater contamination from known sites) would not occur along the SDG&E Central South Substation Alternative site and therefore are not addressed in this section.

Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination (Class II)

Hazardous materials such as vehicle fuels and oils would be used and stored during construction activities for the Top of the World Substation Alternative, resulting in a potential for soil contamination from improper handling, spills, or leaks. A list of general types of hazardous materials expected to be used during project construction is presented in Table D.10-7. Spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. SDG&E's APMs HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (proper storage and disposal of generated waste) would be included as part of the project in order to reduce the likelihood of spills with training and plans for appropriate storage and disposal of hazardous materials. Nevertheless, spills could still occur and cause soil contamination, resulting in a significant impact. Implementation of Mitigation Measures P-1a (Implement Environmental Monitoring Program) and P-1b (Maintain emergency spill supplies and equipment) would reduce the significant environmental impacts of hazardous material spills to less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measure for Impact P-1: Improper handling and/or storage of hazardous materials during construction could cause soil or groundwater contamination

P-1a Implement Environmental Monitoring Program.

P-1b Maintain emergency spill supplies and equipment.

Operational Impacts

Impact P-5: Soil or groundwater contamination could result from accidental spill or release of hazardous materials during operation and maintenance (Class III)

Soil or groundwater contamination could result from accidental spill or release of hazardous materials at the Top of the World Substation Alternative during operation and maintenance of substation facilities. This could result in exposure of facility workers and the public to hazardous materials and contamination of the soil and/or groundwater. Mineral oil would be used in the new transformers, switches, circuit breakers, capacitors, and other new electrical equipment (PEA, 2006). Mineral oil is considered a hazardous material under federal regulations (CWA Section 311), and mineral oil storage or use in above-ground storage containers in levels exceeding 660 gallons in a single oil storage tank or greater than 1,320 gallons in one or multiple containers at a site is regulated under Title 40, CFR, 112—"the SPCC rule" which is part of the federal Clean Water Act (CWA). In addition, the new Top of the World Substation Alternative would require new Hazardous Material Business Plan, Hazardous Communication Plan, Spill Response Plan, Temporary Storage and Disposal facility permit, and SPCC Plan for the

facility. SDG&E would reduce potential impacts from accidental spill or release with APMs that require the following: personnel using hazardous material be trained in their use, safety procedures, and proper use of safety equipment (HS-APM-1); environmental safety plans associated with hazardous material use and storage for the project be developed (HS-APM-3); and that all hazardous materials and waste be stored and disposed of in accordance with federal, State, and local regulations (HS-APM-10). In the event a spill were to occur, these APMs would reduce the potential for contamination from such a spill and exposure of workers or the public to hazardous materials by ensuring that that any spilled material and any resulting surficial contaminated soil would be quickly and correctly cleaned up and disposed of, resulting in limited to no exposure of hazardous materials to the environment and workers. This would result in an adverse but less than significant impact (Class III).

Electric and Magnetic Fields and Other Field-Related Concerns

Recognizing that there is a great deal of public interest and concern regarding potential health effects from exposure to electric and magnetic fields (EMFs) from power lines, this section provides information regarding EMF associated with electric utility facilities and the potential effects of the Proposed Project related to public health and safety. Potential health effects from exposure to electric fields from power lines is typically not of concern since *electric fields* are effectively shielded by materials such as trees, walls, etc., (PTI 1993). Therefore, the majority of the following information related to EMF focuses primarily on exposure to *magnetic fields* from power lines. However, this section does not consider magnetic fields in the context of CEQA/NEPA and determination of environmental impact, first because there is no agreement among scientists that EMF creates a health risk, and second because there are no defined or adopted CEQA/NEPA standards for defining health risk from EMF. As a result, EMF information is merely presented for the benefit of the public and decisionmakers.

Additional concerns regarding the Proposed Project related to power line fields include: corona and audible noise; radio, television, electronic equipment interference; induced currents and shock hazards and effects on cardiac pacemakers. Environmental impacts are defined for these issues, and mitigation measures are recommended. These field issues are addressed in Section D.10.23.

Defining EMF

Electric and magnetic fields are separate phenomena and occur both naturally and as a result of human activity across a broad electrical spectrum. Naturally occurring electric and magnetic fields are caused by the weather and the earth's geomagnetic field. The fields caused by human activity result from technological application of the electromagnetic spectrum for uses such as communications, appliances, and the generation, transmission, and local distribution of electricity.

The frequency of a power line is determined by the rate at which electric and magnetic fields change their direction each second. For power lines in the United States, the frequency of change is 60 times per second and is defined as 60 Hertz (Hz) power. In Europe and many other countries, the frequency of electric power is 50 Hz. Radio and communication waves operate at much higher frequencies: 500,000 Hz to 1,000,000,000 Hz. The information presented in this document is limited to the EMF from power lines operating at frequencies of 50 or 60 Hz.

Electric power flows across transmission systems from generating sources to serve electrical loads within the community. The apparent power flowing over a transmission line is determined by the transmission line's voltage and the current. The higher the voltage level of the transmission line, the lower the amount of current needed to deliver the same amount of power. For example, a 115 kV transmission line with 200 amps of current will transmit approximately 40,000 kilowatts (kW), and a 230 kV transmission line requires only 100 amps of current to deliver the same 40,000 kW.

Electric Fields

Electric fields from power lines are created whenever the lines are energized, with the strength of the field dependent directly on the voltage of the line creating it. Electric field strength is typically described in terms of kilovolts per meter (kV/m). Electric field strength attenuates (reduces) rapidly as the distance

from the source increases. Electric fields are reduced at many receptors because they are effectively shielded by most objects or materials such as trees or houses.

Unlike magnetic fields, which penetrate almost everything and are unaffected by buildings, trees, and other obstacles, electric fields are distorted by any object that is within the electric field including the human body. Even trying to measure an electric field with electronic instruments is difficult because the devices themselves will alter the levels recorded. Determining an individual's exposure to electric fields requires the understanding of many variables, one of which is the electric field itself, with others including how effectively the person is grounded and their body surface area within the electric field.

Electric fields in the vicinity of power lines can cause the same phenomena as the static electricity experienced on a dry winter day, or with clothing just removed from a clothes dryer, and may result in small nuisance electric discharges when touching long metal fences, pipelines, or large vehicles. An acknowledged potential impact to public health from electric transmission lines is the hazard of electric shock: electric shocks from transmission lines are generally the result of accidental or unintentional contact by the public with the energized wires. The issue of induced currents and shock hazards is addressed separately in Sections D.10.21 and D.10.24.

Magnetic Fields

Magnetic fields from power lines are created whenever current flows through power lines at any voltage. The strength of the field is directly dependent on the current in the line. Magnetic field strength is typically measured in milliGauss (mG). Similar to electric fields, magnetic field strength attenuates rapidly with distance from the source. However, unlike electric fields, magnetic fields are not easily shielded by objects or materials.

The nature of a magnetic field can be illustrated by considering a household appliance. When the appliance is energized by being plugged into an outlet but not turned on, no current flows through it. Under such circumstances, an electric field is generated around the cord and appliance, but no magnetic field is present. If the appliance is switched on, the electric field would still be present and a magnetic field would also be created. The electric field strength is directly related to the magnitude of the voltage from the outlet and the magnetic field strength is directly related to the magnitude of the current flowing in the cord and appliance.

D.10.20 EMF in the Proposed Project Area

Transmission Lines

The Proposed Project consists of the installation of about 90 miles of new 500 kV transmission line, approximately 60 miles of new 230 kV transmission lines and associated substations. The line has been divided into a number of segments based upon the type of structures being used and other adjacent transmission circuits. The majority of the 500 kV line is located in desert open space (including many segments adjacent to other existing transmission lines), and parklands of the Anza-Borrego Desert State Park.

In undeveloped and natural areas, measurable EMFs are not present except in the vicinity of existing power line corridors. Public exposure to EMF in undeveloped areas would be limited, primarily due to the absence of the public; however, periodic and transient uses of these areas for activities such as

recreation would result in public exposure to EMF when in the vicinity of existing electric transmission lines

In developed areas public exposure to EMFs is more widespread and encompasses a very broad range of field intensities and durations. In the developed and agricultural areas of the Proposed 500 kV segment EMFs are prevalent from the use of electronic appliances or equipment and existing electric distribution lines. In general distribution lines exist throughout developed portions of the community and represent the predominant source of public exposure to power line EMF except in the immediate vicinity of transmission corridors.

Two sections of the 500 kV line would pass through or adjacent to developed lands with primarily agricultural uses. These sections are 12.9 miles between Mileposts 7.6 to 20.5 in the Imperial Valley and 7.5 miles between Mileposts 83.5 to 91 near Ranchita and San Felipe. The proposed 230 kV transmission lines are located primarily in developed areas, but pass through areas with low density residential land uses and open space/grazing lands.

Substations

At substations, station buswork, substation equipment, and transmission and distribution lines entering or exiting a station all contribute electromagnetic fields to the immediate environment of an existing substation. However, the most significant contributors to the EMFs are the transmission and distribution lines. Therefore, the transmission line magnetic fields described above would also apply in the immediate area of substations.

D.10.21 Scientific Background and Regulations Applicable to EMF

EMF Research

For more than 20 years, questions have been asked regarding the potential effects within the environment of EMFs from power lines, and research has been conducted to provide some basis for response. Earlier studies focused primarily on interactions with the electric fields from power lines. In the late 1970s, the subject of magnetic field interactions began to receive additional public attention and research levels have increased. A substantial amount of research investigating both electric and magnetic fields has been conducted over the past several decades; however, much of the body of national and international research regarding EMF and public health risks remains contradictory or inconclusive.

Extremely low frequency (ELF) fields are known to interact with tissues by inducing electric fields and currents in these fields. However, the electric currents induced by ELF fields commonly found in our environment are normally much lower than the strongest electric currents naturally occurring in the body such as those that control the beating of the heart.²

Research related to EMF can be grouped into three general categories: cellular level studies, animal and human experiments, and epidemiological studies. These studies have provided mixed results, with some studies showing an apparent relationship between magnetic fields and health effects while other similar studies do not.

² The power frequencies (50/60 Hz) are part of the ELF (3 Hz to 300 Hz) bandwidth.

Since 1979, public interest and concern specifically regarding magnetic fields from power lines has increased. This increase has generally been attributed to publication of the results of a single epidemiological study (Wertheimer and Leeper, 1979). This study observed an association between the wiring configuration on electric power lines outside of homes in Denver and the incidence of childhood cancer. Following publication of the Wertheimer and Leeper study, many epidemiological, laboratory, and animal studies regarding EMF have been conducted.

Research on ambient magnetic fields in homes and buildings in several western states found average magnetic field levels within most rooms to be approximately 1 mG, while in a room with appliances present, the measured values ranged from 9 to 20 mG (Severson et al., 1988, and Silva, 1988). Immediately adjacent to appliances (within 12 inches), field values are much higher, as illustrated in Tables D.10-21 and D.10-22. These tables indicate typical sources and levels of electric and magnetic field exposure the general public experiences from appliances.

Methods to Reduce EMF

EMF levels from transmission lines can be reduced in three primary ways: shielding, field cancellation, or increasing the distance from the source. Shielding, which reduces exposure to electric fields, can be actively accomplished by placing trees or other physical barriers along the transmission line ROW. Shielding also results from existing structures the public may use or occupy along the line. Since electric fields can be blocked by most materials, shielding is effective for the electric fields but is not effective for magnetic fields.

Magnetic fields can be reduced either by cancellation or by increasing distance from the source. Cancellation is achieved in two ways. A transmission line circuit consists of three "phases": three separate wires (conductors) on a transmission tower. The configuration of these three conductors can reduce magnetic fields. First, when the configuration places the three conductors closer together, the interference, or cancellation, of the fields from each wire is enhanced. This technique has practical limitations because of the potential for short circuits if the wires are placed too close together. There are also worker safety issues to consider if spacing is reduced. Second, in instances where there are two circuits (more than three phase wires), such as in portions of the Proposed Project,

Table D.10-21. Typical Electric Field Values for Appliances, at 12 Inches

Appliance	Electric Field Strength (kV/m)
Electric Blanket	0.25*
Broiler	0.13
Stereo	0.09
Refrigerator	0.06
Iron	0.06
Hand Mixer	0.05
Phonographs	0.04
Coffee Pot	0.03

*1 to 10 kV/m next to blanket wires.
Source: Enertech, 1985.

Table D.10-22. Magnetic Field from Household Appliances

Appliance	Magnetic Field (mG)	
	12" Distant	Maximum
Electric range	3-30	100-1,200
Electric oven	2-25	10-50
Garbage disposal	10-20	850-1,250
Refrigerator	0.3-3	4-15
Clothes washer	2-30	10-400
Clothes dryer	1-3	3-80
Coffee maker	0.8-1	15-250
Toaster	0.6-8	70-150
Crock pot	0.8-1	15-80
Iron	1-3	90-300
Can opener	35-250	10,000-20,000
Mixer	6-100	500-7,000
Blender, popper, processor	6-20	250-1,050
Vacuum cleaner	20-200	2,000-8,000
Portable heater	1-40	100-1,100
Fan/blower	0.4-40	20-300
Hair dryer	1-70	60-20,000
Electric shaver	1-100	150-15,000
Color TV	9-20	150-500
Fluorescent fixture	2-40	140-2,000
Fluorescent desk lamp	6-20	400-3,500
Circular saw	10-250	2,000-10,000
Electric drill	25-35	4,000-8,000

Source: Gauger, 1985

cancellation can be accomplished by arranging phase wires from the different circuits near each other. In underground lines, the three phases are typically much closer together than in overhead lines because the cables are insulated (coated).

The distance between the source of fields and the public can be increased by either placing the wires higher aboveground, burying underground cables deeper, or by increasing the width of the ROW. For transmission lines, these methods can prove effective in reducing fields because the reduction of the field strength drops rapidly with distance.

Scientific Panel Reviews

Numerous panels of expert scientists have convened to review the data relevant to the question of whether exposure to power-frequency EMF is associated with adverse health effects. These evaluations have been conducted in order to advise governmental agencies or professional standard-setting groups. These panels of scientists first evaluate the available studies individually, not only to determine what specific information they can offer, but also in terms of the validity of their experimental design, methods of data collection, analysis, and suitability of the authors' conclusions to the nature and quality of the data presented. Subsequently, the individual studies, with their previously identified strengths and weaknesses, are evaluated collectively in an effort to identify whether there is a consistent pattern or trend in the data that would lead to a determination of possible or probable hazards to human health resulting from exposure to these fields.

These reviews include those prepared by international agencies such as the World Health Organization (WHO, 1984, WHO, 1987, and WHO, 2001) and the international Non-Ionizing Radiation Committee of the International Radiation Protection Association (IRPA/INIRC, 1990) as well as governmental agencies of a number of countries, such as the U.S. EPA, the National Radiological Protection Board of the United Kingdom, the Health Council of the Netherlands, and the French and Danish Ministries of Health.

As noted below these scientific panels have varied conclusions on the strength of the scientific evidence suggesting that power frequency EMF exposures pose any health risk.

In May 1999 the National Institute of Environmental Health Sciences (NIEHS) submitted to Congress its report titled, *Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields*, containing the following conclusion regarding EMF and health effects:

Using criteria developed by the International Agency for Research on Cancer (IARC), none of the Working Group considered the evidence strong enough to label ELF-EMF exposure as a known human carcinogen or probable human carcinogen. However, a majority of the members of this Working Group concluded that exposure to power-line frequency ELF-EMF is a possible carcinogen [emphasis added].

In June 2001, a scientific working group of IARC (an agency of WHO) reviewed studies related to the carcinogenicity of EMF. Using standard IARC classification, magnetic fields were classified as "possibly carcinogenic to humans" based on epidemiological studies. "Possibly carcinogenic to humans" is a classification used to denote an agent for which there is limited evidence of carcinogenicity in humans and less than sufficient evidence of carcinogenicity in experimental animals. Other agents identified as "possibly carcinogenic to humans" include gasoline exhaust, styrene, welding fumes, and coffee (WHO, 2001).

On behalf of the California Public Utilities Commission (CPUC), the California Department of Health Services (DHS) completed a comprehensive review of existing studies related to EMF from power lines and potential health risks. This risk evaluation was undertaken by three staff scientists with the DHS. Each of these scientists is identified in the review results as an epidemiologist, and their work took place from 2000 to 2002. The results of this review titled, *An Evaluation of the Possible Risks From Electric and Magnetic Fields (EMFs) From Power Lines, Internal Wiring, Electrical Occupations, and Appliances*, were published in June 2002. The conclusions contained in the executive summary are provided below:

- To one degree or another, all three of the DHS scientists are inclined to believe that EMFs can cause some degree of increased risk of childhood leukemia, adult brain cancer, Lou Gehrig's Disease, and miscarriage.
- They strongly believe that EMFs do not increase the risk of birth defects, or low birth weight.
- They strongly believe that EMFs are not universal carcinogens, since there are a number of cancer types that are not associated with EMF exposure.
- To one degree or another they are inclined to believe that EMFs do not cause an increased risk of breast cancer, heart disease, Alzheimer's Disease, depression, or symptoms attributed by some to sensitivity to EMFs. However, all three scientists had judgments that were "close to the dividing line between believing and not believing" that EMFs cause some degree of increased risk of suicide.
- For adult leukemia, two of the scientists are "close to the dividing line between believing or not believing" and one was "prone to believe" that EMFs cause some degree of increased risk.

The report indicates that the DHS scientists are more inclined to believe that EMF exposure increased the risk of the above health problems than the majority of the members of scientific committees that have previously convened to evaluate the scientific literature. With regard to why the DHS review's conclusions differ from those of other recent reviews, the report states:

The three DHS scientists thought there were reasons why animal and test tube experiments might have failed to pick up a mechanism or a health problem; hence, the absence of much support from such animal and test tube studies did not reduce their confidence much or lead them to strongly distrust epidemiological evidence from statistical studies in human populations. They therefore had more faith in the quality of the epidemiological studies in human populations and hence gave more credence to them.

While the results of the DHS report indicate these scientists believe that EMF can cause some degree of increased risk for certain health problems, the report did not quantify the degree of risk or make any specific recommendations to the CPUC.

In addition to the uncertainty regarding the level of health risk posed by EMF, individual studies and scientific panels have not been able to determine or reach consensus regarding what level of magnetic field exposure might constitute a health risk. In some early epidemiological studies, increased health risks were discussed for daily time-weighted average field levels greater than 2 mG. However, the IARC scientific working group indicated that studies with average magnetic field levels of 3 to 4 mG played a pivotal role in their classification of EMF as a possible carcinogen.

Policies, Standards, and Regulations

A number of counties, states, and local governments have adopted or considered regulations or policies related to EMF exposure. The reasons for these actions have been varied; in general, however, the actions can be attributed to addressing public reaction to and perception of EMF as opposed to responding to the findings of any specific scientific research. Following is a brief summary of the guidelines and regulatory activity regarding EMF.

International Guidelines

The International Radiation Protection Association, in cooperation with the World Health Organization, has published recommended guidelines (INRC, 1998) for electric and magnetic field exposures. For the general public, the limits are 4.2 kV/m for electric fields, and 833 mG for magnetic fields. Neither of these organizations has any governmental authority nor recognized jurisdiction to enforce these guidelines. However, because they were developed by a broad base of scientists, these guidelines have been given merit and are considered by utilities and regulators when reviewing EMF levels from electric power lines.

National Guidelines

Although the U.S. EPA has conducted investigations into EMF related to power lines and health risks, no national standards have been established. There have been a number of studies sponsored by the U.S. EPA, the Electric Power Research Institute (EPRI), and other institutions. Several bills addressing EMF have been introduced at the congressional level and have provided funding for research; however, no bill has been enacted that would regulate EMF levels.

The 1999 NIEHS report to Congress suggested that the evidence supporting EMF exposure as a health hazard was insufficient to warrant aggressive regulatory actions. The report did suggest passive measures to educate the public and regulators on means aimed at reducing exposures. NIEHS also suggested the power industry continue its practice of siting lines to reduce public exposure to EMF and to explore ways to reduce the creation of magnetic fields around lines.

State Guidelines

Several states have adopted limits for electric field strength within transmission line ROWs. Florida and New York are the only states that currently limit the intensity of magnetic fields from transmission lines. These regulations include limits within the ROW as well as at the edge of the ROW and cover a broad range of values. Table D.10-23 lists the states regulating EMF and their respective limits. The magnetic field limits were based on an objective of preventing field levels from increasing beyond levels currently experienced by the public and are not based upon any link between scientific data and health risks (Morgan, 1991).

Elsewhere in the United States, several agencies and municipalities have taken action regarding EMF policies. These actions have been varied and include requirements that the fields be considered in the siting of new facilities. The manner in which EMF is considered has taken several forms. In a few instances, a concept referred to as “prudent avoidance” has been formally adopted. Prudent avoidance, a concept proposed by Dr. Granger Morgan of Carnegie-Mellon University, is defined as “. . . limiting exposures which can be avoided with small investments of money and effort” (Morgan, 1991). Some municipalities or regulating agencies have proposed limitations on field strength, requirements for siting of lines away from residences and schools, and, in some instances, moratoria on the construction of new transmission lines. The origin of these individual actions has been varied, with some initiated by regulators at the time of new transmission line proposals within their community, and some by public grass-roots efforts.

California Department of Education's (CDE) Standards for Siting New Schools Adjacent to Electric Power Lines Rated 50 kV and Above³

The California Department of Education (CDE) evaluates potential school sites under a range of criteria, including environmental and safety issues. There are no EMF guidelines that apply to existing school sites; this information is presented in order to demonstrate the range of existing guidelines that address EMF.

Exposures to power-frequency electric and magnetic fields (EMF) are one of the criteria. CDE has established the following "setback" limits for locating any part of a school site property line near the edge of easements for any electrical power lines rated 50 kV and above:

- 100 feet for lines from 50 to 133 kV
- 150 feet for lines from 220 to 230 kV
- 350 feet for lines from 500 to 550 kV

School districts that have sites that do not meet the California Department of Education setbacks may still obtain construction approval from the State by submitting an EMF mitigation plan. The mitigation plan should consider possible reductions of EMF from all potential sources, including power lines, internal wiring, office equipment and mechanical equipment.

CPUC Guidelines

In 1991, the CPUC initiated an investigation into electric and magnetic fields associated with electric power facilities. This investigation explored the approach to potential mitigation measures for reducing public health impacts and possible development of policies, procedures or regulations. Following input from interested parties the CPUC implemented a decision (D.93-11-013) that requires that utilities use "low-cost or no-cost" mitigation measures for facilities requiring certification under General Order 131-D.⁴ The decision directed the utilities to use a 4% benchmark on the low-cost mitigation. This decision also implemented a number of EMF measurement, research, and education programs, and pro-

Table D.10-23. EMF Regulated Limits (by State)

State	Electric Field (kV/M)	Magnetic Field (mG)	Location	Application
Florida (codified)				
500 kV Lines	10		In ROW	Single-circuit
	2	200	Edge of ROW	Single-circuit
	2	250	Edge of ROW	Double-circuit
230 kV Lines or less	8		In ROW	
	2	150	Edge of ROW	230 kV lines or less
Minnesota	8		In ROW	>200 kV
Montana (codified)	1		Edge of ROW	>69 kV
	7		In ROW	Road crossings
New Jersey	3		Edge of ROW	Guideline for complaints
New York	1.6	200	Edge of ROW	>125 kV, >1 mile
	7		In ROW	Public roads
	11		In ROW	Public roads
	11.8		In ROW	Other terrain
North Dakota	9		In ROW	Informal
Oregon (codified)	9		In ROW	230 kV, 10 miles

Source: Public Utilities Commission of Texas

³ Taken from "School Site Selection and Approval Guide" by School Facilities Planning Division of the California Department of Education.

⁴ General Order 131-D is entitled "Rules Relating to the Planning and Construction of Electric Generation, Transmission/Power/Distribution Line Facilities and Substations Located in California."

vided the direction that led to the preparation of the DHS study described above. The CPUC did not adopt any specific numerical limits or regulation on EMF levels related to electric power facilities.

In Decision D.93-11-013, the CPUC addressed mitigation of EMF of utility facilities and implemented the following recommendations:

- No-cost and low-cost steps to reduce EMF levels
- Workshops to develop EMF design guidelines
- Uniform residential and workplace programs
- Stakeholder and public involvement
- A four-year education program
- A four-year non-experimental and administrative research program
- An authorization of federal experimental research conducted under the National Energy Policy Act of 1992.

Most recently the CPUC issued Decision D.06-01-042, on January 26, 2006, affirming the low-cost/no-cost policy to mitigate EMF exposure from new utility transmission and substation projects. This decision also adopted rules and policies to improve utility design guidelines for reducing EMF. The CPUC stated “at this time we are unable to determine whether there is a significant scientifically verifiable relationship between EMF exposure and negative health consequences.” The CPUC has not adopted any specific limits or regulation on EMF levels related to electric power facilities.

D.10.22 Consideration of Electric and Magnetic Fields

As discussed in Section D.10.11.3, there remains a lack of consensus in the scientific community in regard to public health impacts due to EMF at the levels expected from electric power facilities. Further, there are no federal or State standards limiting human exposure to EMFs from transmission lines or substation facilities in California. For those reasons, EMF is not considered in this EIR/EIS as a CEQA/NEPA issue and no impact significance is presented. This information is presented to allow understanding of the issue by the public and decisionmakers.

D.10.22.1 EMF Data Applicable to Proposed Project

500 kV Segment

EMF levels in the project area would not change during construction of the Proposed Project, since the lines would not be energized during construction. When the transmission lines are energized, there would be some permanent increase in the level of EMFs in the existing environment. These effects are anticipated to be localized.

The magnetic field levels calculated by SDG&E have been reviewed and are considered to be accurate. The magnetic field from the Proposed Project will continuously vary depending upon the amount of power flowing over the transmission line. SDG&E’s analysis of magnetic fields is based upon a 2010 summer peak loading on the lines. Table D.10-24 identifies line segments by milepost, structure type and any adjacent circuits and presents the estimated magnetic field along the 500 kV segment of the Proposed Project once the new lines are operational.

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Table D.10-24. Magnetic Field Levels (mG) – 500 kV Segment

MP	Description & Approx. Location	Left Side of ROW			Right Side of ROW		
		Existing	Proposed	Change	Existing	Proposed	Change
0-4	IV Sub to MP 4, 600 ft ROW (500 kV adjacent to/north existing 500 kV SWPL 150 ft lattice towers)	2	42	+40	38	44	+6
4-7.6	West of Seeley, 200 ft ROW (500 kV in new corridor; 150 ft lattice towers)	0	41	+ 41	0	43	+43
7.6-20.5	Agricultural area, 200 ft ROW (500 kV in new corridor; 150 ft steel poles; 5 150 ft lattice towers at angles)	0	24	+ 28	0	23	+26
20.4-37.7	IID corridor, 200 ft ROW (500 kV adjacent to/east of IID 161 kV; 150 ft lattice towers)	1	41	+40	7	43	+36
37.7-47.3	Hwy 78, 200 ft ROW (500 kV; 150 ft lattice towers)	0	41	+ 41	0	43	+43
47.3-50.1	South of Hwy 78+IID, 200 ft ROW (500 kV adjacent to/east of IID 92 kV; 150 ft lattice towers). Assuming 100 ft ROW for existing case.	6	41	+35	6	43	+37
50.1-54	South of Hwy 78, 200 ft ROW (500 kV in new corridor; 150 ft lattice towers)	0	41	+41	0	43	+43
54-60.9	East of ABDSP, 200 ft ROW (500 kV adjacent to/south of IID 92 kV; 125 ft lattice towers). Assuming 100 ft ROW for existing case.	6	41	+35	6	43	+37
60.9-68.2	ABDSP: Old Kane Springs Road (150 ft ROW; 500 kV and 92 kV collocated on same towers; 125 ft lattice towers). Assuming 100 ft ROW for existing case.	6	42	+36	6	38	+32
68.2-69.7	ABDSP: East of Narrows Substation 150 ft ROW (500 kV overhead; 92 kV underground in Hwy 78, 125 ft H-frame towers). Assuming 100 ft ROW for existing case.	6	68	+62	6	70	+64
69.7-74.8	ABDSP: West of Narrows Substation 150 ft ROW (500 kV overhead; 69 kV underground in Hwy 78, 125 ft H-frame towers). Assuming 100 ft ROW for existing case.	6	68	+62	6	70	+64
74.8-83.5	ABDSP: Grapevine Canyon, 200 ft ROW (500 kV and 69 kV collocated on same towers. 130 ft lattice towers). Assuming 100 ft ROW for existing case.	6	42	+36	6	38	+32
83.5-87.6	South of Ranchita, 200 ft ROW (500 kV and 69 kV collocated on same towers 130 ft lattice towers). Assuming 100 ft ROW for existing case.	6	42	+36	6	38	+32
87.6-91	San Felipe, 200 ft ROW (500 kV in new corridor; 150 ft lattice towers)	0	41	+41	0	43	+43

230 kV Segment

The Proposed Project includes a double-circuit 230 kV transmission line that would exit the proposed Central East Substation, passing through the Santa Ysabel Valley, towards Ramona, and into the Sycamore Canyon Substation. A segment of underground 230 kV line is also proposed through the area of San Diego Country Estates (southeast of Ramona).

Table D.10-25 identifies line segments by milepost, structure type and any adjacent circuits and presents the estimated magnetic field along the 230 kV segments of the Proposed Project once the new lines are in operation.

Table D.10-25. Magnetic Field Levels (mG) – 230 kV Segment

MP	Description & Approx. Location	Left Side of ROW			Right Side of ROW		
		Existing	Proposed	Change	Existing	Proposed	Change
Central Link							
91-97.6	Vista Irrigation District Property (2 – 230 kV in new corridor; 120 ft lattice towers or steel poles)	0	7	+7	0	6	+6
97.6-109.4	Santa Ysabel Valley (2 – 230 kV lines adjacent to relocated SDG&E 69 kV; SRPL: 120 ft steel poles; 69 kV: 60 ft steel poles; 400 ft ROW)	0	35	+35	1	62	+61
Inland Valley Link							
109.4-117.2	East of Ramona (2 – 230 kV lines adjacent to/northwest of SDG&E 69 kV (120 ft steel poles), 200 ft ROW)	36	46	+10	2	14	+12
117.2-121.9	Mt. Gower/SD Country Estates (2 – 230 kV lines Underground; 60 ft ROW)	0	22	+25	0	22	+25
121.9-136.3	West of Ramona (2 – 230 kV adjacent to/northwest of SDG&E 69 kV (120 ft steel poles), 100 ft ROW)	34	33	-1	7	45	+38
Coastal Link							
136.3-142.3	Sycamore Canyon to Chicarita Substation. 230 kV collocated with 138 kV, adjacent to/southwest of existing 69/230 kV (120 ft steel poles), 200 ft ROW	31	15	-16	79	9	-70
142.3-146.6	Rancho Peñasquitos and Los Peñasquitos Canyon Preserve (230 kV lines Underground; 60 ft ROW)	0	2	+2		2	
146.6-149.9	West of Los Peñasquitos Canyon Preserve. 230 kV collocated with 69 kV, adjacent to/south of existing 69/138 kV (120 ft steel poles), 300 ft ROW	12	3	-9	78	22	-56
Sycamore Canyon – Elliot 69 kV Reconductor							
N/A	Sycamore Canyon–Elliot Substations Reconductor of existing 69 kV (65-85 ft wood poles): Segment 1	7	16	+9	6	15	+9
	Sycamore Canyon–Elliot Substation Reconductoring: Segment 2	15	16	+1	9	13	+4

D.10.22.2 EMF Data Applicable to Alternatives

The alternatives evaluated in this EIR/EIS include both 500 kV and 230 kV alternatives. Nearly all alternative segments would mimic the configuration of a Proposed Project segment, so estimates of magnetic fields for alternatives are presented below. Note that alternative transmission lines may involve similar levels of EMFs to those described above for the Proposed Project because the magnetic field level highly dependent upon whether the alternative is adjacent to existing transmission circuits.

Imperial Valley Link Alternatives

There are three transmission alternatives in the Imperial Valley Link: the FTHL Eastern Alternative, the SDG&E West of Dunaway Alternative, and the SDG&E West Main Canal–Huff Road Modification Alternative. Each of these alternatives would include a 500 kV transmission line in a new ROW, where no existing transmission lines exist. Therefore, the magnetic field levels would be similar to those in Proposed Project MP 4 to 7.6: from 41 to 46 milliGauss (mG).

Anza-Borrego Link Alternatives

Within Anza-Borrego Desert State Park, the magnetic field from transmission alternatives would be as follows:

- **Partial Underground 230 kV ABDSP SR78 to S2 Alternative.** This alternative would begin at the San Felipe Substation where the 500 kV line would be converted to 230 kV (notes this is 2, 230 kV UG lines) and installed underground as it exits the substation to the west. The 230 kV underground portion would have similar magnetic field to the Proposed Project's underground segment through San Diego Country Estates (Ramona): 25 mG at 30 feet.
- **Overhead 500 kV ABDSP within Existing ROW Alternative.** This alternative would include 500 kV towers like the Proposed Project, but they would be taller and would stay within the narrower existing ROW in the Park. West of Tamarisk Grove Campground, the line would include the 69 kV underbuild. This segment would have a similar magnetic field to the Proposed Project through Grapevine Canyon (from 38 to 42 mG), though it would likely be lower due to the increased height of the towers.

Central Link Alternatives

- **Santa Ysabel Existing ROW Alternative.** This alternative would require construction of a new 230 kV line adjacent to the existing 69 kV line through the Santa Ysabel Valley. This would be similar to the Proposed Project in the Santa Ysabel area, which would be installed adjacent to the relocated 69 kV line. After installation of the 230 kV line the magnetic field would be similar to the Proposed Project through Santa Ysabel at about 33 to 45 mG at the edge of the ROW.
- **Santa Ysabel Partial Underground Alternative and the Santa Ysabel SR79 All Underground Alternative.** The 230 kV underground portions would have similar magnetic fields to the Proposed Project's underground segment through San Diego Country Estates (Ramona): 25 mG at the edge of the 30-foot ROW.
- **SDG&E Mesa Grande Alternative.** This alternative would relocate the Proposed Project and the relocated 69 kV line to a location lower on the hillside. The magnetic field would be similar (if same circuit spacing and ROW width the fields would be the same) to the Proposed Project through Santa Ysabel at about 33 to 45 mG at the edge of the ROW.

Inland Valley Link Alternatives

- **CNF Existing 69 kV Route Alternative.** This alternative would move a short segment of the Proposed Project's 230 kV line from a new ROW to a route following the existing 69 kV line. The magnetic field would be similar to the Proposed Project through Santa Ysabel at about 33 to 45 mG at the edge of the ROW.
- **Oak Hollow Road Underground Alternative.** This alternative would replace the Proposed Project's overhead 230 kV line with an underground segment of 230 kV. The existing overhead 69 kV line would be unchanged. The 230 kV underground portion would have similar magnetic fields to the Proposed Project's underground segment through San Diego Country Estates (Ramona) immediately to the west of this area: 25 mG at the edge of the ROW.
- **San Vicente Road Transition Alternative.** This alternative would shift the location of the proposed transition from underground to overhead. The magnetic field of the overhead and underground segments in the Ramona area (as shown in Table D.10-25, MP 117 to 136) would not change.
- **Chuck Wagon Road Alternative.** This alternative would include both underground and overhead segments of double-circuit 230 kV transmission line in a new ROW. The 230 kV underground portion would have similar magnetic fields to the Proposed Project's underground segment through San Diego Country Estates (Ramona): 25 mG. The overhead segment would be similar to the Proposed Project segment from MP 91-97 (Vista Irrigation District): 7-8 mG at the edge of the ROW.

Coastal Link Alternatives

The Coastal Link includes three alternatives that would require installation of a single-circuit 230 kV line that would be almost entirely underground: the **Pomerado Road to Miramar Area North Alternative**, the **Los Peñasquitos Canyon Preserve–Mercy Road Alternative**, and the **Black Mountain to Park Village Road Underground Alternative**. The magnetic field for these alternatives would be similar to that of the Proposed Project segment that would be underground in the Peñasquitos Preserve (2 mG at a distance of 30 feet).

Southwest Powerlink Alternatives

The alternatives that begin by paralleling the existing 500 kV Southwest Powerlink transmission line would have segments described as follows:

- **New overhead 500 kV line parallel to existing SWPL** (Interstate 8 Alternative for the easternmost 35 miles; MP I8-0 to I8-35). Magnetic field would range from 42 to 44 mG at edge of 200-foot ROW.
- **New overhead 500 kV line in new ROW** (no existing transmission lines in ROW). This would occur on the Interstate 8 Alternative (MP I8-36 to I8-65), the entire BCD Alternative, the Modified Route D Alternative up to the substation, and the entire Route D Alternative. Magnetic field would be 41 to 43 mG at edge of 200-foot ROW.
- **New underground 500 kV.** This would occur on the Interstate 8 Alternative's Buckman Springs Underground Option. Magnetic field data for a 500 kV underground transmission line is not available.
- **New overhead double-circuit 230 kV in new ROW** (no existing transmission lines in ROW). This would occur on the Interstate 8 Alternative and the Modified Route D Alternative after passing through the Interstate 8 and Modified Route D Substations. The magnetic field would be similar to the Proposed Project segment from MP 91-97 (Vista Irrigation District): 7-8 mG at the edge of the ROW.

- **New underground double-circuit 230 kV.** This would occur on the Interstate 8 Alternative between MP I8-70 and I8-79. Magnetic field would be similar to the Proposed Project's underground segment through San Diego Country Estates (Ramona): 25 mG at the edge of a 30 foot ROW.

LEAPS Alternatives (Generation Only or Generation Plus Transmission)

This alternative would require installation of a new 500 kV transmission line in areas where no transmission currently exists. This configuration would be similar to Proposed Project segments where Magnetic field would be 41 to 43 mG at edge of 200-foot ROW. Magnetic fields for the Talega-Escondido segment were estimated by SDG&E for its application for the Valley-Rainbow Project. The Preliminary Magnetic Field Management Plan for that project stated that the existing magnetic field is 58 mG, and that with the addition of the second 230 kV circuit and implementation of "no cost" management techniques (low reactance phasing), the post-project magnetic field would be reduced to 19 mG.

D.10.22.3 SDG&E's Proposed EMF Mitigation

In accordance with CPUC Decision D.93-11-013, SDG&E evaluated "no-cost" and "low-cost" magnetic field reduction steps for the proposed transmission and substation facilities. Appendix 7 (Field Management Plan) presents details of the plan proposed by SDG&E. Specific measures to reduce EMF which SDG&E adopted for inclusion in the Proposed Project are summarized below:

Central Substation

- Keep electrical equipment as compact as possible, locating high current devices such as transformers, capacitors and reactors away from the fence.
- Orient buses and cables so that parallel runs are as far from property lines as practical.
- Restrict public access to the area around the substation.

500 and 230 kV Transmission Lines

- Locate lines closer to the centerline of the utility corridors.
- Combine existing transmission circuits onto the same structure as the Proposed Project.
- Arrange phases of different circuits to reduce magnetic fields when multiple circuits are located on the same structure or in the same underground ductbank.

D.10.22.4 Summary Regarding EMF and Health Effects

After several decades of study regarding potential public health risks from exposure to power line EMF, research results remains inconclusive. Several national and international panels have conducted reviews of data from multiple studies and state that there is not sufficient evidence to conclude that EMF causes cancer. More recently the International Agency for Research on Cancer (IARC) and the California Department of Health Services (DHS) both classified EMF as a *possible* carcinogen. The information included in the preceding sections identifies existing EMF exposures within the community, which are widespread and cover a very broad range of field intensities and duration, and specific information on the EMF levels estimated for the Proposed Project are provided. Presently there are no applicable regulations related to EMF levels from power lines; however, the CPUC has implemented, and recently re-confirmed, a decision requiring utilities to incorporate "low-cost" or "no-cost" measures for managing EMF from power lines.

SDG&E's Proposed Project does incorporate low-cost and no-cost measures as mitigation for magnetic fields. The preceding information and other potential additional mitigation measures are provided for the benefit of the public and decisionmakers in reviewing the Proposed Project.

D.10.23 Other Field-Related Public Concerns

Other public concerns related to electric power facility projects, are both safety and nuisance issues, and include: radio/television/electronic equipment interference; induced currents and shock hazards and potential effects on cardiac pacemakers. Each of these issues is described below.

Radio/Television/Electronic Equipment Interference

Corona discharges form at the surface of a transmission line conductor when the electric field intensity on the conductor surface exceeds the breakdown strength of air. The breakdown of air generates light, audible noise, radio noise, ozone, conductor vibration and causes a dissipation of energy. (EPRI, 1982) The Institute of Electrical and Electronic Engineers (IEEE) has published a design guide (Radio Noise Subcommittee, 1971) that is used to limit conductor surface gradients so as to avoid corona levels which would cause electronic interference.

Gap discharges occur when an arc forms across a gap in loose or worn line hardware and can also be a source of high frequency energy. It is estimated that over 90 percent of interference problems for electric transmission lines are due to gap discharges. Line hardware is designed to be problem-free, but wind motion, corrosion, and other factors can create a gap discharge condition. When identified, gap discharges can be located and remedied by utilities by tightening loose fittings or replacing worn hardware.

Electric fields from power lines do not typically pose interference problems for electronic equipment in businesses since the equipment is shielded by buildings and walls. However, magnetic fields can penetrate buildings and walls, thereby interacting with electronic equipment. Depending upon the sensitivity of equipment, the magnetic fields can interfere with equipment operation. Review of this phenomenon in regard to the sensitivity of electrical equipment identifies a number of thresholds for magnetic field interference. Interference with cathode ray tube (CRT) type computer monitors can be detected at magnetic field levels of 10 mG and above, while large screen or high-resolution CRT monitors can be susceptible to interference at levels as low as 5 mG. Other specialized equipment, such as medical equipment or testing equipment can be sensitive at levels below 5 mG. Equipment that may be susceptible to very low magnetic field strengths is typically installed in specialized and controlled environments, since even building wiring, lights, and other equipment can generate magnetic fields of 5 mG or higher.

The most common electronic equipment that can be susceptible to magnetic field interference is CRT type computer monitors. Magnetic field interference results in disturbances to the image displayed on the monitor, often described as screen distortion, "jitter," or other visual defects. In most cases it is annoying, and at its worst, it can prevent use of the monitor. This type of interference is a recognized problem in the video monitor industry. As a result, there are manufacturers who specialize in monitor interference solutions and shielding equipment. Possible solutions to this problem include: relocation of the monitor, use of magnetic shield enclosures, software programs, and replacement of CRT monitors with liquid crystal displays that are not susceptible to magnetic field interference.

Induced Currents and Shock Hazards

Power line fields can induce voltages and currents on conductive objects, such as metal roofs or buildings, fences, and vehicles. Transmission lines are designed to limit the short circuit current, from conductive items beneath the line, to a safe level (less than 5 milliamperes). When a person or animal comes in contact with a conductive object a perceptible current or small electric shock may occur. These small electric shocks cause no physiological harm; however, they may present a nuisance.

Cardiac Pacemakers

An area of concern related to electric fields from transmission lines has been the possibility of interference with cardiac pacemakers. There are two general types of pacemakers: asynchronous and synchronous. The asynchronous pacemaker pulses at a predetermined rate. It is generally immune to interference because it has no sensing circuitry and is not exceptionally complex. The synchronous pacemaker, however, pulses only when its sensing circuitry determines that pacing is necessary. Interference from transmission line electric field may cause a spurious signal on the pacemaker's sensing circuitry. However, when these pacemakers detect a spurious signal, such as a 60 Hz signal, they are programmed to revert to an asynchronous or fixed pacing mode of operation, returning to synchronous operation within a specified time after the signal is no longer detected. Cardiovascular specialists do not consider prolonged asynchronous pacing a problem, since some pacemakers are designed to operate that way. Periods of operation in this mode are commonly induced by cardiologists to check pacemaker performance. So, while transmission line electric fields may interfere with the normal operation of some of the older model pacemakers, the result of the interference is not harmful, and is of short duration (EPRI, 1985 and 1979).

D.10.24 Significance Criteria and Approach to Impact Assessment – Safety and Non-Magnetic Field Electric Power Field Issues

This section focuses on the following environmental impacts from the proposed SRPL Project: corona; induced current; electronic equipment interference; wind, fire, and earthquake hazards; and effects on cardiac pacemakers. Section D.15 addresses fire and fuels related to transmission lines.

D.10.24.1 Definition and Use of Significance Criteria

Radio/Television/Electronic Equipment Interference

There are no local, State, or federal regulations with specific limits on high frequency emissions from electric power facilities. Federal Communication Commission (FCC) regulations require that transmission lines be operated so that no harmful interference is produced (FCC regulations, Section 15.25).

Induced Currents and Shock Hazards

The National Electrical Safety Code (NESC) specifies that transmission lines be designed to limit short circuit current from vehicles or large objects near the line to no more than 5 milliamperes (mA). CPUC General Order 95 and the NESC also address shock hazards to the public by providing guidelines on minimum clearances to be maintained for practical safeguarding of persons during the installation, operation, or maintenance of overhead transmission lines and their associated equipment.

Cardiac Pacemakers

It has been reported that synchronous pacemakers can be affected by electric fields between 2 and 9 kV/m (EPRI, 1985 and 1979). As described above, when a synchronous pacemaker is in a field in this range, a few older model pacemakers may revert to an asynchronous mode.

Wind, Earthquake, Fire, and Terrorism

Transmission line structures used to support overhead transmission lines must meet the requirements of the CPUC, General Order No. 95, Rules for Overhead Electric Line Construction. This design code and the National Electrical Safety Code include loading requirements related to wind conditions.

D.10.24.2 Impacts Identified

Table D.10-26 lists the impacts identified for the Proposed Project and alternatives for Safety and Non-Magnetic Field Electric Power Field Issues, along with the significance of each impact. Impacts are classified as Class I (significant, cannot be mitigated to a level that is less than significant), Class II (significant, can be mitigated to a level that is less than significant), Class III (adverse, but less than significant), or Class IV (beneficial). Detailed discussions of each impact and the specific locations where each is identified are presented in the following sections. Note that fire hazards are addressed separately in Section D.15 and earthquakes and faults are addressed in Section D.13.

Table D.10-26. Impacts Identified – Proposed Project – Safety and Non-EMF Electric Power Field Issues

Impact No.	Description	Impact Significance
Proposed Project and All Transmission Alternatives		
PS-1	Transmission line operation causes radio and television Interference	Class II
PS-2	Transmission line operation causes induced currents and shock hazards in joint use corridors	Class II
PS-3	Electric fields can effect cardiac pacemakers	Class III
PS-4	Project structures can be affected by wind and earthquake hazards	Class III
PS-5	Transmission or substation facilities can suffer an outage from terrorism or wildfire	Class III
Proposed Project – Future Expansion		
PS-1	Transmission line operation causes radio and television Interference	Class II
PS-2	Transmission line operation causes induced currents and shock hazards in joint use corridors	Class II
PS-3	Electric fields can effect cardiac pacemakers	Class III
PS-4	Project structures can be affected by wind and earthquake hazards	Class III
PS-5	Transmission or substation facilities can suffer an outage from terrorism or wildfire	Class III
Proposed Project – Connected Actions		
PS-1	Transmission line operation causes radio and television Interference	Class II
PS-2	Transmission line operation causes induced currents and shock hazards in joint use corridors	Class II
PS-3	Electric fields can effect cardiac pacemakers	Class III
PS-4	Project structures can be affected by wind and earthquake hazards	Class III
PS-5	Transmission or substation facilities can suffer an outage from terrorism or wildfire	Class III

D.10.25 Environmental Impacts and Mitigation Measures for the Proposed Project and Alternatives – Safety and Non-EMF Electric Power Field Issues

Section D.10.23 addresses magnetic field issues related to potential health effects. This section addresses power field issues that are not related to magnetic fields. These impacts apply equally to the Proposed Project and all alternatives.

Impact PS-1: Transmission line operation causes radio and television interference (Class II)

Corona or gap discharges related to high frequency radio and television interference impacts are dependent upon several factors including the strength of broadcast signals and are anticipated to be very localized if it occurs. Individual sources of adverse radio/television interference impacts can be located and corrected on the power lines. Conversely, magnetic field interference with electronic equipment such as computer monitors can be corrected through the use of software, shielding or changes at the monitor location. Mitigation Measures PS-1a and PS-1b are recommended to reduce the potential impacts of interference (Class II).

Mitigation Measures for Impact PS-1: Transmission line operation causes radio and television interference

- PS-1a** **Limit the conductor surface electric gradient.** As part of the design and construction process for the Proposed Project, the Applicant shall limit the conductor surface electric gradient in accordance with the IEEE Radio Noise Design Guide.
- PS-1b** **Document and resolve electronic interference complaints.** After energizing the transmission line, SDG&E shall respond to and document all radio/television/equipment interference complaints received and the responsive action taken. These records shall be made available to the CPUC for review upon request. All unresolved disputes shall be referred by SDG&E to the CPUC for resolution.

Impact PS-2: Transmission line operation causes induced currents and shock hazards in joint use corridors (Class II)

Induced currents and voltages on conducting objects near the proposed transmission lines represent a potential significant impact that can be mitigated. These impacts do not pose a threat in the environment if the conducting objects are properly grounded, and Mitigation Measure PS-2a is implemented to reduce the potential impacts of induced currents (Class II).

Mitigation Measure for Impact PS-2: Transmission line operation causes induced currents and shock hazards in joint use corridors

- PS-2a** **Implement grounding measures.** As part of the siting and construction process for the Proposed Project, SDG&E shall identify objects (such as fences, metal buildings, and pipelines) within and near the right-of-way that have the potential for induced voltages and shall implement electrical grounding of metallic objects in accordance with SDG&E's standards. The identification of objects shall document the threshold electric field strength and metallic object size at which grounding becomes necessary.

Impact PS-3: Electric fields can affect cardiac pacemakers (Class III)

The electric fields associated with the Proposed Project's transmission lines may be of sufficient magnitude to impact operation of a few older model pacemakers resulting in them reverting to an asynchronous pacing. Cardiovascular specialists do not consider prolonged asynchronous pacing to be a problem; periods of operation in this mode are commonly induced by cardiologists to check pacemaker performance. Therefore, while the transmission line's electric field may impact operation of some older model pacemakers, the result of the interference is of short duration and is not considered significant or harmful (Class III). No mitigation measures are required or recommended.

Impact PS-4: Project structures would be affected by wind and earthquakes (Class III)

Wind. Transmission line structures used to support overhead transmission lines must meet the requirements of the California Public Utilities Commission, General Order No. 95, Rules for Overhead Electric Line Construction. This design code and the National Electrical Safety Code include loading requirements related to wind conditions. Transmission support structures are designed to withstand different combinations of loading conditions including extreme winds. These design requirements include use of safety factors that consider the type of loading as well as the type of material used, e.g., steel, wood, or concrete. Failures of transmission line support structures are rare, however they may occur as a result of extremely high loading conditions such as tornadoes, ice storms, or Santa Ana winds (see Section D.15.1 for a description of structure failures as a result of Santa Ana winds). The Proposed Project would be constructed on steel lattice towers or tubular steel poles, and failure would be extremely unlikely. Therefore, the public safety impact of wind effects on transmission towers is less than significant (Class III).

Earthquakes. Overhead transmission lines consist of a system of support structures and interconnecting wire that is inherently flexible. Industry experience has demonstrated that under earthquake conditions structure and member vibrations generally do not occur or cause design problems. Overhead transmission lines are designed for dynamic loading under variable wind conditions that generally exceed earthquake loads (see Section D.13, Geology, for a discussion of underground transmission lines in the vicinity of active faults). The risk that an earthquake would cause overhead towers to threaten public safety is less than significant (Class III).

Impact PS-5: Transmission or substation facilities can suffer an outage (Class III)

If the Sunrise Powerlink transmission line or a substation along the transmission line were damaged (e.g., from terrorism or a major wildfire) and this resulted in a power outage, SDG&E would re-route electricity using other components of the regional transmission system. This was demonstrated in the October 2007 wildfires, when the 500 kV Southwest Powerlink was out of service for several days due to the proximity of the Harris Fire. Even though this transmission line generally imports the majority of San Diego's power, SDG&E was able to maintain service (to areas not directly burned) by re-routing electricity to lines that connect its system to the Southern California Edison system. The regional transmission system is interconnected in such a way that it is not possible to say that a single line outage would cause an outage at a specific hospital, airport, security facility, etc. In addition, although most facilities of this type may receive power from the SDG&E transmission system supplied by the proposed Sunrise line, major facilities would also have back up power/generators to prevent electricity interruptions in the event of an outage. Therefore, this impact is considered to be adverse, but less than significant (Class III).

D.10.26 Future Transmission System Expansion - EMF

The Proposed Project would facilitate the possible future construction of additional 230 kV and 500 kV transmission lines. These lines are not proposed at this time, but because the construction of the Proposed Project would include a substation and create new transmission corridors that could be used by these additional circuits, impact analysis is presented in this EIR/EIS.

Electric and Magnetic Fields

As described in Section B.2.7 and illustrated on Figures B-12a and B-12b, the 230 kV and 500 kV Future Transmission Systems are assumed to follow existing 69 kV and 230 kV transmission corridors. It is impossible to estimate magnetic fields for a hypothetical transmission system because the magnetic fields vary based on many factors, including current in the line, direction of power flow, height of towers, and separation of conductor phases. Therefore, no estimates are presented. However, the data presented in Section D.22 for the Proposed Project and alternatives can be used to understand the possible range of magnetic fields for 230 and 500 kV transmission lines.

Safety and Non-EMF Power Field Issues

The impacts for the future transmission lines that could be built by SDG&E would be similar to those identified for the Proposed Project in Section D.10.25. The discussion in that section would apply also here. The following impacts could occur, and the mitigation measures referenced above for each impact would also be applicable.

- PS-1, Transmission line operation causes radio and television Interference (Class II)
 - Mitigation Measures PS-1a (Limit the conductor surface electric gradient) and PS-1b (Document and resolve electronic interference complaints)
- PS-2, Transmission line operation causes induced currents and shock hazards in joint use corridors (Class II)
 - Mitigation Measure PS-2a (Implement grounding measures)
- PS-3, Electric fields can effect cardiac pacemakers (Class III)
- PS-4, Transmission line structures can be affected by wind and earthquake hazards (Class III)
- PS-5, Transmission or substation facilities can suffer an outage from terrorism or wildfire (Class III)

D.10.27 Connected Actions and Indirect Effects – EMF

Section B.6 describes the other projects that have been found to be related to the Sunrise Powerlink Project. They fall into two categories:

- **Connected Actions.** The four projects found to be connected to the Sunrise Powerlink Project are the Stirling Energy Systems solar facility, two components of the IID 230 kV transmission system upgrades, the Esmeralda–San Felipe Geothermal Project, and the Jacumba Substation.
- **Indirect Effects.** One project, the SCE La Rumorosa Wind Project, would create effects as a result of the construction and operation of the Sunrise Powerlink Project.

Each of these five projects would have transmission line components that would create electric and magnetic field effects. For all five projects, the impacts would be as stated below.

Impact PS-1: Transmission line operation causes radio and television interference (Class II)

Corona or gap discharges related to high frequency radio and television interference impacts are dependent upon several factors including the strength of broadcast signals and are anticipated to be very localized if it occurs. Individual sources of adverse radio/television interference impacts can be located and corrected on the power lines. Conversely, magnetic field interference with electronic equipment such as computer monitors can be corrected through the use of software, shielding or changes at the monitor location. Mitigation Measures PS-1a and PS-1b are presented below that would reduce the potential impacts of interference to a less than significant level (Class II).

Mitigation Measures for Impact PS-1: Transmission line operation causes radio and television interference

PS-1a Limit the conductor surface electric gradient.

PS-1b Document and resolve electronic interference complaints.

Impact PS-2: Transmission line operation causes induced currents and shock hazards in joint use corridors (Class II)

Induced currents and voltages on conducting objects near the proposed transmission lines represent a potential significant impact that can be mitigated. These impacts do not pose a threat in the environment if the conducting objects are properly grounded, and Mitigation Measure PS-2a is recommended to reduce the potential impacts of induced currents to a less than significant level (Class II).

Mitigation Measure for Impact PS-2: Transmission line operation causes induced currents and shock hazards in joint use corridors

PS-2a Implement grounding measures.

Impact PS-3: Electric fields can affect cardiac pacemakers (Class III)

The electric fields associated with the 230 kV transmission line, in addition to the SWPL #1 500 kV line may be of sufficient magnitude to impact operation of a few older model pacemakers resulting in them reverting to an asynchronous pacing. Cardiovascular specialists do not consider prolonged asynchronous pacing to be a problem; periods of operation in this mode are commonly induced by cardiologists to check pacemaker performance. Therefore, while the transmission line's electric field may impact operation of some older model pacemakers, the result of the interference is of short duration and is not considered significant or harmful (Class III). No mitigation measures are required or recommended.

Impact PS-4: Transmission line structures can be affected by wind and earthquakes (Class III)

Wind. Transmission line structures used to support overhead transmission lines must meet the requirements of the National Electrical Safety Code, which includes clearances, design, and loading requirements related to wind and weather conditions. Transmission support structures are designed to withstand different combinations of loading conditions including extreme winds. These design requirements include use of safety factors that consider the type of loading as well as the type of material used, e.g., wood, steel or concrete. Failures of transmission line support structures are rare, however they may occur as a result of extremely high loading conditions such as tornadoes, ice storms, or Santa Ana winds (see Section D.15.1 for a description of structure failures as a result of Santa Ana winds). Impacts on public health and safety would be less than significant (Class III).

Earthquake. Overhead transmission lines consist of a system of support structures and interconnecting wire that is inherently flexible. Industry experience has demonstrated that under earthquake conditions structure and member vibrations generally do not occur or cause design problems. Overhead transmission lines are designed for dynamic loading under variable wind conditions that generally exceed earthquake loads.

Impact PS-5: Transmission or substation facilities can suffer an outage (Class III)

Electric system security has been an increasing focus of utility attention over the past several years. Major substations and high-voltage transmission lines serving major metropolitan areas could be targets of terrorist acts. If a major transmission line were seriously damaged, the effects could include (a) injury to onsite utility personnel, and/or (b) power outages in areas served by the facilities. As is common practice when a line is out of service, the utility would have to re-route power around the affected substation or transmission line to serve load, and an outage could occur for some period of time while the system was modified to provide electric service from other substations.

The Connected Action projects would generate from 30 to 900 MW of power. The largest generation component (Stirling) is a solar thermal generating facility, but because solar is an intermittent resource, it would not be a part of the baseload generation relied upon by San Diego for reliability. Similarly the La Rumorosa wind project would not be considered as a reliability project, and the Truckhaven Esmeralda geothermal project would provide only 30 MW of power. For all of these projects, the regional transmission system is interconnected in such a way that it is not possible to say that a single project or line outage would cause an outage at a specific hospital, airport, security facility, etc. Major facilities would also have back up power/generators to prevent electricity interruptions in the event of an outage, such as would occur with a terrorist attack on a transmission line. Therefore, this impact is considered to be adverse, but less than significant (Class III).

D.10.28 Overall Impacts of the Proposed Project – EMF and Field Related Concerns

After several decades of study regarding potential public health risks from exposure to power line EMF, research results remains inconclusive. The information included in the preceding sections identifies existing EMF exposures within the community, which are widespread and cover a very broad range of field intensities and duration, and specific information on the EMF levels estimated for the Proposed Project are provided. Presently there are no applicable regulations or standards related to EMF levels from power lines; however, the CPUC has implemented, and recently re-confirmed, a decision requiring utilities to incorporate “low-cost” or “no-cost” measures for managing EMF from power lines. SDG&E’s Proposed Project does incorporate low-cost and no-cost measures as mitigation for magnetic fields.

The Proposed Project, Future Transmission System Expansion, Connected Actions and Indirect Effects would have some safety and non-EMF related Concerns. Transmission line operation can cause radio and television interference depending on the strength of broadcast signals. Mitigation measures PS-1a and PS-1b would reduce the potential impacts of interference to a less than significant level (Class II). Transmission line operation can also cause induced currents and shock hazards in joint use corridors; however implementation of Mitigation Measure PS-2a reduces the impact to a less than significant level (Class II).

D.10.29 Mitigation Monitoring, Compliance, and Reporting Table

Table D.10-27 presents the mitigation monitoring, compliance and reporting table for Public Health and Safety. Mitigation measures not originating in this section do not appear in the table; they appear only in the mitigation monitoring, compliance and reporting table for the section in which they were originally recommended. For a summary of all impacts and their respective mitigation measures, please see the Impact Summary Tables at the end of the Executive Summary.

Sections D.10.11 and D.10.12 recommend mitigation measures for the projects described under Future Transmission System Expansion and Connected Actions/Indirect Effects. Those mitigation measures are presented for consideration by the agencies that will issue permits for construction of the connected and future projects. Because those projects would not be constructed as a result of approval of the Sunrise Powerlink Project, the recommended mitigation measures are not included in this mitigation monitoring table.

Table D.10-27. Mitigation Monitoring Program – Public Health and Safety

MITIGATION MEASURE	P-1a: Implement Environmental Monitoring Program. An environmental monitoring program will be implemented by SDG&E or its contractors to ensure that the plans defined in HS-APM-1 (personnel trained in proper use and safety procedures for the chemicals used), HS-APM-2 (personnel trained in refueling of vehicles), HS-APM-3 (preparation of environmental safety plans including spill prevention and response plan), HS-APM-8 (SDG&E's and/or General Contractor environmental/health and safety personnel), and HS-APM-10 (storage and disposal of hazardous and solid waste) are followed throughout the period of construction. SDG&E will designate an Environmental Field Representative who will be on site to observe and document adherence to the plan for all construction spreads.
Location	All locations along the proposed and alternative routes.
Monitoring / Reporting Action	Review documentation of training
Effectiveness Criteria	Training and monitoring programs educate project staff and workers regarding all regulatory plan requirements.
Responsible Agency	CPUC, BLM
Timing	Prior to and during construction
MITIGATION MEASURE	P-1b: Maintain emergency spill supplies and equipment. Hazardous material spill kits will be maintained onsite by SDG&E or its contractors for response to small spills. This shall include oil-absorbent material, tarps, and storage drums to be used to contain and control any minor releases. Emergency spill supplies and equipment will be kept adjacent to all areas of work and in staging areas, and will be clearly marked. Detailed information for responding to accidental spills and for handling any resulting hazardous materials will be provided in the project's Spill Response Plan defined in HS-APM-3.
Location	All locations along the proposed and alternative routes.
Monitoring / Reporting Action	Observe construction sites and activities for compliance
Effectiveness Criteria	Emergency spill supplies are available at the construction sites
Responsible Agency	CPUC, BLM
Timing	During construction

Table D.10-27. Mitigation Monitoring Program – Public Health and Safety

MITIGATION MEASURE	<p>P-2a: Test for residual pesticides/herbicides in agricultural areas. In areas where the land has been or is currently being farmed, soil samples shall be collected and tested for herbicides, pesticides, and fumigants to determine the presence and extent of any contamination. The sampling and testing plan shall be prepared and conducted by California licensed geologist or engineers and/or California Certified laboratories. Samples shall be tested at a California Certified laboratory. A report documenting the areas proposed for sampling, and the process used for sampling, testing shall be submitted to the CPUC and BLM for review and approval at least 60 days before construction. Results of the laboratory testing and recommended resolutions for handling and excavation of material found to exceed regulatory requirements shall be submitted to the CPUC and BLM 30 days prior to construction.</p> <p>Excavated materials containing elevated levels of pesticide or herbicide will require special handling and disposal according to procedures established by the regulatory agencies. Effective dust suppression procedures will be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Regulatory agencies for the State of California (DTSC or RWQCB) and the appropriate county (San Diego or Imperial) shall be contacted by SDG&E or its contractor to plan handling, treatment, and/or disposal options.</p>
Location	All proposed and alternative route segments that are within or immediately adjacent to agricultural uses.
Monitoring / Reporting Action	Observe construction sites and activities for compliance
Effectiveness Criteria	Excavated soils containing pesticides and herbicides are properly handled and disposed of.
Responsible Agency	CPUC, BLM, appropriate local and State regulatory agencies.
Timing	Prior to construction
MITIGATION MEASURE	<p>P-3a: Appoint individuals with correct training for sampling, data review, and regulatory coordination. In the event that potential contaminated soil or groundwater is encountered, samples shall be collected by an OSHA-trained individual with a minimum of 40-hour hazardous material site worker training. Laboratory data from suspected contaminated material shall be reviewed by the contractor's Health and Safety Officer and/or SDG&E's Field Environmental Representative and they shall coordinate with the appropriate regulatory agency (RWQCB or local CUPA agency) if contamination is confirmed to determine the suitable level of worker protection and the necessary handling and/or disposal requirements.</p>
Location	All proposed and alternative route segments that have potential for discovery of unknown contamination.
Monitoring / Reporting Action	Observe construction sites and activities for compliance and review weekly reports.
Effectiveness Criteria	Excavated soils containing industrial contaminants are properly handled and disposed of.
Responsible Agency	CPUC, BLM, and RWQCB or local CUPA.
Timing	During construction
MITIGATION MEASURE	<p>P-3b: Documentation of compliance with measures for encountering unknown contamination. If during grading or excavation work, the contractor observes visual or olfactory evidence of contamination in the exposed soil a report of the location and the potential contamination, results of laboratory testing, recommended mitigation (if contamination is verified), and actions taken shall be submitted to the CPUC and BLM for each event. This report shall be submitted within 30 days of receipt of laboratory data.</p>
Location	All proposed and alternative route segments that have potential for discovery of unknown contamination.
Monitoring / Reporting Action	Observe construction sites and activities for compliance and review incident reports.
Effectiveness Criteria	Excavated soils containing industrial contaminants are properly handled and disposed of.
Responsible Agency	CPUC, BLM.

Table D.10-27. Mitigation Monitoring Program – Public Health and Safety

Timing	During construction
MITIGATION MEASURE	<p>P-7a: Evaluate contaminated sites. SDG&E shall implement the following steps, all steps be completed at least 90 days prior to project construction, to prevent mobilization of contaminants and exposure of workers and the public:</p> <ul style="list-style-type: none"> • Step 1. Investigate the site to determine whether it has a record of hazardous material contamination which would affect construction activities. This investigation should be performed as a Phase I–Environmental Site Assessment (Phase I ESA). If contamination is found that could potentially affect the health and safety of workers or the public during construction of the Proposed Project, proceed to Step 2. • Step 2. Perform a characterization study of the site to determine the nature and extent of the contamination present at the location before construction activities proceed within the project ROW near the suspect site. • Step 3. Determine the need for further investigation and/or remediation of the soil or groundwater conditions at or near the contaminated site, i.e., within areas of ground disturbance for the Proposed Project. (For example, if there would be little or no contact with contaminated materials, industrial cleanup levels would likely be applicable. If site activities would involve human contact with the contaminated materials, such as would be the case with excavation of contaminated materials during project construction, then Step 4 shall be completed. If no human contact is anticipated, then no further mitigation would be required for the location.) • Step 4. If it is determined that disturbance or excavation of soils or groundwater with contamination would accompany construction at the site, undertake a Phase II Environmental Site Investigation (Phase II ESI) involving sampling and further characterization of potentially contaminated areas with the project ROW or reroute the line away from the contamination area. Should further investigation reveal high levels of hazardous materials, mitigate health and safety risk according San Diego County CUPA or RWQCB regulations or requirements. This would include site-specific Health and Safety Plans, Work Plans, and/or Remediation Plans.
Location	All proposed and alternative route segments that have identified contaminated sites with 0.25 miles of the alignment.
Monitoring / Reporting Action	Review Phase I and Phase II reports, and any other site characterization reports generated.
Effectiveness Criteria	Sites with environmental contaminants are avoided or if crossed, excavated soils containing contaminants are properly handled and disposed of.
Responsible Agency	CPUC, BLM, and RWQCB or local CUPA.
Timing	Ninety (90) days prior to project construction
MITIGATION MEASURE	<p>PS-1a: Limit the conductor surface electric gradient. As part of the design and construction process for the Proposed Project, the Applicant shall limit the conductor surface electric gradient in accordance with the IEEE Radio Noise Design Guide.</p>
Location	Along the overhead route segment
Monitoring / Reporting Action	Review construction design plans to ensure consistency with IEEE Radio Noise Design Guide.
Effectiveness Criteria	The potential for magnetic field interference of electronic equipment is reduced.
Responsible Agency	CPUC
Timing	Prior to construction.
MITIGATION MEASURE	<p>PS-1b: Document and resolve electronic interference complaints. After energizing the transmission line, SDG&E shall respond to and document all radio/television/equipment interference complaints received and the responsive action taken. These records shall be made available to the CPUC for review upon request. All unresolved disputes shall be referred by SDG&E to the CPUC for resolution.</p>
Location	Along the overhead route segment

Table D.10-27. Mitigation Monitoring Program – Public Health and Safety

Monitoring / Reporting Action	Review documentation provided.
Effectiveness Criteria	All radio/television/equipment interference disputes are resolved.
Responsible Agency	CPUC
Timing	During the operations of the project.
MITIGATION MEASURE	PS-2a: Implement grounding measures. As part of the siting and construction process for the Proposed Project, SDG&E shall identify objects (such as fences, metal buildings, and pipe-lines) within and near the right-of-way that have the potential for induced voltages and shall implement electrical grounding of metallic objects in accordance with SDG&E's standards. The identification of objects shall document the threshold electric field strength and metallic object size at which grounding becomes necessary.
Location	Along the entire transmission line route
Monitoring / Reporting Action	Review documentation provided; verify that necessary grounding measures are installed.
Effectiveness Criteria	The potential for impacts associated with induced currents and voltages on objects near the energized transmission line are reduced.
Responsible Agency	CPUC
Timing	Prior to energizing the transmission line.

D.10.30 References for Contamination

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